Draft
Program Timberland Environmental Impact Report
for the
Meadow Vista
Vegetation Management Project

Lead Agency:

California Department of Forestry and Fire Protection
The Resources Building
1416 Ninth Street
Sacramento, CA 95814

Prepared By:

Placer County Resource Conservation District
251 Auburn Ravine Road, Suite 201
Auburn, CA 95603

June 3, 1999

Table of Contents

List of Figures

Table of Contents (continued)

List of Tables

Appendices

Summary

1. PROJECT DESCRIPTION

In 1996, the Placer County Board of Supervisors adopted the Meadow Vista Community Plan; the plan establishes a policy framework for long-term community growth including policies to reduce the hazards of wildland fire through fuel reduction measures. Prominent policy direction is a desire to perpetuate the existing forested condition while recognizing that the area has significant fire dangers that must be addressed.

The purpose of the Meadow Vista Vegetation Management Project is to facilitate the implementation of a system of shaded fuelbreaks, defensible space, and defensible landscape practices in keeping with objectives of the Meadow Vista Community Plan utilizing the Program Timberland Environmental Impact Report (PTEIR) process as adopted by the California Board of Forestry. The PTEIR is tiered to the Meadow Vista Community Plan Final EIR, which is incorporated by reference. This PTEIR is also consistent with the California Fire Plan prepared by the State Board of Forestry and implemented by the Nevada-Yuba-Placer Ranger Unit of the California Department of Forestry and Fire Protection.

Managing existing vegetation under this PTEIR may involve to some degree the commercial harvesting of trees, whether to remove dead or dying trees, trees posing a fire hazard, or those suffering from insect/disease problems. The California Department of Forestry and Fire Protection (CDF) regulates commercial timber harvesting on private lands in California as well as providing rural fire protection and enforcing defensible space vegetation standards around buildings.

The PTEIR also discusses the potential impacts of the Meadow Vista portions of the "Proposition 204 Coordinated American River Watershed Health Improvement and Monitoring Project." This $1,000,000 grant given to the American River Watershed Group will be used to construct fuel breaks, inspect residences for defensible space, and provide public education programs. The impacts of the latter program are closely related to those that would result from the overall vegetation management program proposed in this PTEIR.

Mitigation measures in this document are based on current standard State forest practice rules and new measures with higher standards developed specifically for the Meadow Vista area.

2. LAND USE AND PLANNING

The Meadow Vista Community Plan (MVCP) contains several policies that relate to and support vegetation management. The Vegetation Management Project is an implementation strategy for community plan policy. Without the Vegetation

Management Project, fuel load reduction in the form of shaded fuelbreaks, defensible space, and healthy forest practices will still occur but at a slower rate. The Meadow Vista Vegetation Management Project is consistent with existing county and community plans. No impact to land use planning policy is anticipated.

3. GEOLOGY AND SOILS

Implementation of the project could result in increased short- and long-term erosion from activities. This impact is considered significant because these activities would result in disruptions, displacements, compaction, or overcovering of the soil and would increase water erosion of soils on the site.

Mitigation

1. Develop a slope map for the PTHP project site or have project maps on current USGS topographic map base.

2. Install waterbars on all exposed soil, heavy equipment trails, and roads no further apart than the Forest Practice Rules Moderate Erosion Hazard rating distance.

3. Restrict timber operations to those areas with low or moderate Erosion Hazard Ratings (EHRs) with slopes less than or equal to 50%. Prohibit timber operations on areas of high or extreme EHR or on slopes over 50%.

4. Require re-stocking in conformance with recommendations of the Registered Professional Forester (RPF) as contained in the PTHP.

5. Require that a minimum of existing organic matter be left on site to reduce energy of rainfall and lower potential erosion. Also, in areas of defensible landscape, lop and/or crush slash and leave it on the ground to further reduce the impact of rain on bare soil.

6. Lop all slash to less than 20 inches above ground, except in areas where higher standards apply (within 100 feet of residences).

7. Prohibit use of heavy equipment within any Watercourse and Lake Protection Zone (WLPZ) except at existing road crossings, thus protecting existing watercourses.

8. Allow only alternatives to WLPZ protection measures that increase the WLPZ width or restrictions within the zone. No decreased restrictions will be allowed.

9. Avoid heavy equipment use on saturated or near-saturated soils.

10. Restrict vegetation removal on landslide-prone areas.

11. Conduct mechanical treatments along contours on areas of moderate to high erosion hazard ratings.

12. New road construction shall be less than 100 feet in length, be on average slopes of less than 20%, involve no substantial cuts and/or fills, and may not occur in any Watercourse and Lake Protection Zone (WLPZ).

13. Allow only in-lieu winter operating plans that do not allow operations in WLPZ or on unstable ground.

Level of Significance Following Mitigation

With implementation of the recommended mitigation measures, impacts to geology and soils will be mitigated to a less than significant level.

4. HYDROLOGY AND WATER QUALITY

Changes in interception and infiltration rates with vegetation removal and the construction of tractor roads associated with the proposed project could contribute to existing flooding problems in Wooley Creek and along the Bear River. Use of heavy equipment, slash, and yarding could result in a possible decrease in water quality in the canals and reservoirs in the Plan area.

Vegetation management activities could result in possible short-term and long-term water quality degradation of streams. In addition to sedimentation impacts, use of heavy equipment presents the potential for accidental spills of pollutants such as gasoline, oil, and diesel fuel.

Mitigation

(See also Mitigation in Chapter 3, Geology and Soils)

1. Establish watercourse and lake protection buffer zones along perennial watercourses in which vegetation removal, fuel reduction, and ground disturbance are limited. The width of the buffer zone is dependent on the adjacent hillside slope and watercourse class as shown below:

	Watercourse Class		
Hillside Slope	Fish Bearing I	Non-Fish Bearing II	Intermittent III
0-30%	75 feet	50 feet	25 feet
30-50%	100 feet	75 feet	50 feet
50% >	150 feet	100 feet	50 feet

2. Prohibit heavy equipment from streamside buffer zones except at designated crossings.

3. Restrict new road construction to less than 100 feet in length with no construction within any watercourse buffer zone.

4. Prohibit clearcut harvesting.

Level of Significance Following Recommended Mitigation

With implementation of recommended mitigation measures, potential impacts to hydrology and water quality will be reduced to a less than significant level.

5. VISUAL RESOURCES

Implementation of the Meadow Vista Vegetation Management Project could result in a change in the visual character of the area through a reduction in the visual quality of the rural residential viewshed. The intent of the PTEIR is to maintain the existing forested condition of the Meadow Vista area while managing the vegetation for wildland fire protection.

Each one of these objectives means reducing the total amount of vegetation in the area, and spacing out remaining vegetation. Overall, the visual impact will be to keep the same basic forest types, only with a more open appearance.

Mitigation

1. Restrict allowable silvicultural harvest methods to only those that maintain at least a minimum amount of mature overstory trees.

2. Leave a variety of size class vegetation in shaded fuelbreak areas, while still providing an adequate disruption of fuel continuity for fuelbreak function.

3. Complete clean-up of slash and organic debris in defensible space and shaded fuelbreak areas. Clean-up shall be by chipping, removing, or burning. Chipping shall occur no later than 45 days after the creation of the slash and debris. Piling for burning shall occur no later than 60 days after the creation of the slash or debris, with burning no later than April 1 of the year following creation or one year from the date of creation, whichever comes first. Removal shall occur no latter than 60 days of the creation of the slash or debris. For clean-up purposes, shaded fuelbreaks shall be 100 feet either side of centerline of designated roads.

Level of Significance

Potential impacts to visual resources will be reduced by limited silvicultural practices proposed for fuel reduction purposes. Vegetative screening can be accomplished by selective removal of brush and understory to ensure privacy. Selective removal and replanting of native or other species to maintain a desired level of screening will reduce impacts to a less than significant level.

6. BIOLOGICAL RESOURCES

Individual Valley oaks could be removed to reduce fuel loading, as commercial hardwood, or indirectly as affected by soil disturbance and soil compaction. The extent of oak loss cannot be assessed at this time; however, future development in the Plan area could contribute incrementally to statewide loss of Valley Oaks in California. The loss of individual oaks could result in displacement or loss of wildlife species that depend on oaks for roosting, foraging, breeding, and movement corridors.

Although restricted activity is anticipated in riparian areas, limited vegetation trampling, streambank degradation, and disturbance to wildlife could occur.

The project could degrade wildlife habitat through fragmentation of continuous woodland and forest habitat, potentially disrupting linkages to other habitats, and lead to the direct and indirect loss or disturbance of special status plants and animals as well as native trees regulated under the Placer County Tree Preservation Ordinance.

The California Wildlife Habitat Relationships (CWHR) model was used to estimate overall impacts to wildlife. The model runs indicate that while some species will experience a reduction in habitat, others will benefit from the Vegetation Management Project. The model runs also indicate that overall urbanization has a more significant impact on wildlife than does removal of vegetation for fuel reduction purposes.

Mitigation

See also mitigation measures in Chapter 4 - Hydrology and Water Quality

1. Each proposed PTHP shall have proposed operating areas inspected by a qualified RPF or other qualified professional for the potential presence of any listed, threatened, or endangered species of plant or animal. No impacts to any listed species will be allowed.

2. Adjust the timing of vegetation management activities to avoid impacts on listed wildlife species, including actively nesting birds.

3. Avoid mechanical clearing in rare natural communities, including areas with special status plants.

4. Clean all equipment off-site to limit the spread of invasive plant species.

5. Encourage retention of Valley Oak areas within the community, and favor Valley Oak reproduction in those areas where it currently exists. Valley oak areas will be identified by individual landowners and retention will be encouraged.

6. Prohibit operations in any WLPZ except removal of dead/dying trees for public safety purposes and fire protection. All class I & II WLPZ watercourse corridors will otherwise remain intact.

7. Retain significant stand structure that will continue to be used for wildlife by restricting silvicultural harvest methods.

Level of Significance Following Recommended Mitigation

With implementation of recommended mitigation measures, potential impacts to biological resources will be reduced to a less than significant level.

7. CULTURAL RESOURCES

Implementation of the Vegetation Management Project could result in the possible disturbance of documented or undocumented cultural resources (archaeological or historical resources).

Mitigation

1. Project areas will be surveyed by a qualified RPF or other qualified professional for potential archaeological and historical resources prior to project implementation.

2. No timber operations may occur on significant archaeological sites.

3. If an archaeological or historical site is discovered during vegetation management operations, work will immediately stop within 100 feet of the site and the CDF Director shall be notified. The significance of the resources shall be determined and necessary protection measures taken. For significant cultural sites that cannot be avoided, site-specific mitigation measures must be approved by the CDF Director.

Level of Significance Following Mitigation

With implementation of proposed mitigation measures, potential impacts to cultural resources will be reduced to a less than significant level.

8. NOISE

The proposed project has the potential to generate short term noise from equipment used in the vegetative management process. This equipment includes chain saws, chippers, and other heavy equipment. Desirable outdoor levels of 60 dBA for residential uses and 45 dBA indoors could be exceeded during the course of vegetation management.

Mitigation

1. Restrict operation of chainsaws and other power-driven equipment to the hours between 7:00 a.m. and 9:00 p.m.. The operation of all other power equipment, except highway vehicles, within 200 feet of an occupied dwelling shall be restricted to the hours between 7:00 a.m. and 9:00 p.m., and shall be prohibited on Sundays and nationally designated legal holidays.

Level of Significance Following Mitigation

Implementation of the recommended mitigation measure would reduce potential noise impacts to a less than significant level.

9. AIR QUALITY

The major sources of air pollution are reactive organic gases (ROG) and oxides of nitrogen (NOx) emissions from heavy equipment exhaust and wind-blown dust from earth disturbance. In addition, disposal of wood/vegetative waste by open burning can create substantial emissions of PM_{10} (particulate matter 10 microns or less in size), CO (carbon monoxide), NOx, ROG, and other compounds. The PTEIR encourages projects to evaluate other vegetation disposal methods and use burning only where there is no other feasible alternative or if prohibiting burning would cause substantial financial hardship. Some non PTHP vegetation management projects will be coordinated with a chipper program coordinated by CDF. This provision will reduce potential smoke emissions.

Vegetation management activities would result in potentially increased pollutant emissions from limited open burning. This impact would be considered potentially significant if open burning was not regulated by the Placer County APCD to minimize harmful conditions and nuisance effects.

Mitigation

1. Burn only on designated burn-days stipulated by the Placer County Air Pollution Control District and with all necessary burn permits.

2. Reduce pre-burn fuel loadings by using other treatments.

3. Require material to dry before piling or allow sufficient time after piling for material to dry before burning. Piles that contain little soil and are constructed to allow air movement will result in a burn that consumes significantly more debris and produces less smoke. More efficient burning and greater heat output will lift smoke higher, reducing smoke concentration near the ground.

4. Use mass-ignition techniques that produce a short duration fire thereby increasing combustion efficiency and flow of smoke into the convection column.

5. Prevent stumps from burning and smoldering.

Level of Significance Following Mitigation

With burning restrictions contained within the PTEIR process, and with implementation of the recommended mitigation measures, impacts to air quality will be reduced to a less than significant level.

10. TRAFFIC AND CIRCULATION

The impact to traffic flow as a result of vegetation management activities is limited to heavy equipment entering and exiting the road shoulder during fuel reduction activities. During such time, through traffic can be disrupted by heavy equipment operation, leading to delays and potential safety concerns. This impact is considered potentially significant as most major roads in the Plan area will have shaded fuelbreaks along their margins with associated work within the public right-of-way.

Mitigation

1. Provide measures such as flagmen and directional traffic control as determined by the Placer County Public Works Department when heavy equipment ingress and egress is required in the public right-of-way.

2. Retain encroachment permits as needed for work in the Caltrans or County right-of-way.

Level of Significance Following Mitigation

Implementation of the proposed mitigation measures will reduce potential traffic impacts to a less than significant level.

11. FIRE PROTECTION

Successful implementation of the Meadow Vista Vegetation Management Project would lead to favorable impacts on wildfire management and fire fighting agencies. In the long run, the project would make it safer to fight fires around

houses, would slow down the spread of fires between houses, and would lower overall fuel loads found in the forests of Meadow Vista.

Care must be taken, however, to reduce the threat of wildland fire by adequate clean-up following timber operations, including provisions for chipping, composting, or controlled burning of slash and debris.

The PTEIR program can only be effective if the public is informed of its benefits through an education program administered by fire agency personnel. The actual amount of increased demand cannot be determined because the levels of service will vary, depending on the commitment of fire service agencies.

Mitigation

1. Lop all logging slash to less than 20 inches above ground, except in those areas where current rules require other treatment (within 100 feet of residences).

2. Require clean up and disposal of debris on the ground within shaded fuelbreak projects to lower potential fire danger. Clean-up shall be by chipping, removing, or burning. Chipping shall occur no later than 45 days after the creation of the slash and debris. Piling for burning shall occur no later than 60 days after the creation of the slash or debris, with burning no later than April 1 of the year following creation or one year from the date of creation, whichever comes first. Removal shall occur no latter than 60 days of the creation of the slash or debris. For clean-up purposes, shaded fuelbreaks shall be 100 feet either side of centerline of designated roads.
3. Require clean up and disposal of all substantial size debris (greater than 1 inch) within defensible space harvests to lower potential fire danger.

4. Require rapid surface drying (spreading of material away from wet areas) for material left on the ground to prevent increase in insect brood material.

Level of Significance Following Mitigation

Implementation of the proposed mitigation measures will reduce potential fire protection impacts to a less than significant level.

12. ALTERNATIVES TO THE PROPOSED PROJECT

No Project Alternative

Under the no project alternative, the PTEIR process would not be used to facilitate the implementation of vegetation management projects, including those proposed under the Proposition 204 project. Individual landowners could continue to clear vegetation for defensible space and defensible landscape purposes with little or

no assistance or control from local or state agencies.

Burning of removed material would be permitted by the APCD on designated burn days. Shaded fuel breaks would be implemented by local and state agencies as well as private property owners on a voluntary basis and with funds as they become available. If commercial timber harvesting is proposed as part of the vegetation management process, then the existing timber harvest plan process on an individual basis would be pursued.

Existing regulations governing modified timber harvest plans could be used to implement some vegetation management objectives. The cost to individual landowners to use this process, however, will be higher than under the PTHP process due to Department of Fish and Game review fees and the need for detailed archaeological reports on all operating areas. The modified THP process has fewer environmental controls as a part of mandated conditions of approval and there are fewer constraints on logging debris disposal methods in most situations. The modified THP system would only partially achieve goals of the PTHP process while not incorporating the necessary mitigation measures contained in the PTEIR.

Vegetation management and fuel load reduction would continue to occur, but at a slower rate than with the PTEIR alternative. The benefits of the application of Forest Practice Rules and mitigation measures within the PTEIR would not be achieved with continued private application of fuel reduction measures. Impacts to soils, water quality, vegetation, wildlife, and air quality would be greater with the no project alternative. This could be especially true if the continued build-up of fuel load lead to a catastrophic wildfire in the community.

Fuel loads would gradually build up throughout the Meadow Vista Community as timber volumes and tree densities increase in the absence of harvesting and/or vegetation management. As a result, risks of damaging wildfires would increase relative to existing conditions. Because of the fuel management practices and standards specified in the PTEIR, the proposed project would not increase wildfire hazards relative to existing conditions and would reduce such hazards relative to the no project alternative.

Alternative 1 - PTEIR with Reduced Vegetation Management

Under this alternative, instead of reducing vegetative ground cover by 40-60%, vegetative cover would be kept at 60-85% ground cover, through the restriction on types of silvicultural practices allowed within any PTHP. Because there would be less vegetation manipulation, there would be less impacts to wildlife habitat, air quality, short-term noise and aesthetics.

Silvicultural practices from the Forest Practice Rules are defined in the *Introduction and Project Description*, including those to be applied in the various harvesting methods described in the Prefered PTEIR Alternative. Of the systems

defined, only clearcutting is prohibited under the Preferred PTEIR system. Under the PTEIR with Reduced Vegetation Management Requirements, only alternative prescriptions would be allowed with provisions similar to the Sanitation/Salvage system. Under Sanitation/Salvage, only those trees that are dead, dying, or that have severe structural problems are removed. The Forest Practice Rules alternative prescription would allow a limited number of green trees to be removed.

For projects undertaking a PTHP under the PTEIR with Reduced Vegetation Management Requirements process, less vegetation would be removed than with other silvicultural practices. This could result in less land disturbance, fewer impacts to wildlife, reduced visual impacts, and reduced potential for air quality impacts. As greater restrictions are placed on the PTEIR process, however, fewer property owners will choose this alternative and the potential effectiveness of mitigation measures in the PTEIR will be reduced.

In addition, reduced vegetation management practices inherent in this alternative would not meet the objective of the project, which is to reduce wildland fire hazards. In addition, this alternative would not meet many policy objectives of the Meadow Vista Community Plan to provide a fire safe community.

Environmentally Preferred Alternative

The proposed PTEIR project is the environmentally preferred alternative. The no project alternative would not provide the incentives for vegetation management that the PTEIR project would, nor would environmental protection measures be assured with continued private property owner pursuit of fuel load reduction outside of the PTEIR process.

Alternative 1 - PTEIR with Reduced Vegetation Management Requirements, would reduce several potential significant effects of the project but would not meet the overall objectives of the project to reduce wildfire hazards. This could result in greater potential for a catastrophic wildfire in the Meadow Vista community and the resulting significant impacts to water quality, biological, visual, cultural and air quality resources.

Chapter 1. Project Description

Background

The purpose of the Meadow Vista Vegetation Management Project is to reduce wildland fire hazards by implementing shaded fuelbreaks, defensible space, and defensible landscape practices in keeping with objectives of the Meadow Vista Community Plan utilizing the Program Timberland Environmental Impact Report (PTEIR) process.

The unincorporated community of Meadow Vista is located in Placer County about seven miles northeast of the City of Auburn. In 1996, the Placer County Board of Supervisors adopted the Meadow Vista Community Plan; although its principal function is to guide new development by way of goals, policies, and implementation measures, the plan also establishes a policy framework for reducing the hazards of wildland fire through fuel reduction measures. Prominent policy direction is a desire to perpetuate the existing forested condition while recognizing that the area has significant fire dangers that must be addressed.

The California Department of Forestry and Fire Protection (CDF) regulates commercial timber harvesting on private lands in California. Commercial timber harvesting is defined as the cutting of commercial species of trees for the purposes of sale or barter for service or goods. CDF also has fire suppression responsibility on private lands and depends on voluntary cooperation of private landowners to implement local fuel reduction measures. (For areas immediately around structures, state law - Public Resources Code 4291 - requires mandatory fuels management). Placer County and CDF will rely primarily on individual private property owners to implement fuel reduction measures. Such measures will include, but not be limited to, brush and grass removal, limb trimming, canopy thinning, and mature tree removal. If the homeowner is selling or bartering trees as a timber "product", such harvesting falls under the State Forest Practice Regulations and may fall within the purview of the PTHP and the PTEIR process, should the landowner so choose. Otherwise, property owners are subject to the standard timber harvest plan process (THP).

The Program Timber Harvest Plan and the Program Timberland EIR

Timber harvesting plans (THPs) for proposed timber operations must be prepared, evaluated, and approved as specified in the Z'berg-Nejedly Forest Practice Act of 1973 (Forest Practice Act) and the California Forest Practice Rules. This process

has been certified as functionally equivalent to the EIR process under CEQA (CEQA Guidelines Sec. 15251).

"Functional equivalence" implies that timber harvesting is exempt from CEQA requirements to prepare EIRs and negative declarations because an equivalent, alternative process for environmental assessment has been established.

Program EIRs are prepared for a series of closely related actions such as phased or long-term projects. The environmental impacts of the timber operations that constitute the proposed project are expected to be similar over an extended period and a wide range of locations.

The California Board of Forestry (BOF) has adopted a new type of THP (the program timber harvest plan, or PTHP) to be used in conjunction with a certified Program Timberland EIR (PTEIR). Operations proposed in a PTHP will be reviewed to determine whether they are consistent with the project described in the PTEIR or could result in significant environmental impacts not covered in the PTEIR.

Although devised to simplify timber harvesting on large parcels under single ownership, the Meadow Vista PTEIR provides most of the informational requirements of the THP system in an "umbrella" document covering multiple ownerships in the Meadow Vista plan area. Shaded fuelbreaks, defensible space around houses, and defensible landscape type harvests with commercial harvesting can be undertaken in conformance with the PTEIR mitigation measures to reduce potential adverse impacts to the environment. The PTEIR process is intended to reduce additional paperwork, costs, and processing time to individual landowners who choose to participate in the process, while maintaining a high level of environmental protection.

When a Program EIR has been certified, applicants typically achieve CEQA compliance for subsequent projects by preparing either a project-level EIR or Negative Declaration. Under the PTEIR approach, owners of timberland for which a PTEIR has been certified would prepare a project level PTHP pursuant to requirements of the Forest Practice Act. This would occur when a timberland owner wishes to undertake a vegetation management project that involves some amount of commercial timber harvesting, and proposes to do the project within the requirements of the approved PTEIR. The Forest Practice Act and Forest Practice Rules contain prescriptive operational standards to which timber operations generally must adhere, including standards for reforestation and protection of soil productivity, water quality, and wildlife habitat. The Rules also allow alternative practices if they provide resource protection at least equal to standard Rules.

A PTHP must be prepared for each individual project by a Registered Professional Forester, but the information required should be significantly less than with a standard Timber Harvesting Plan. The rules for the PTHP (Title 14, Section 1092 of the Public Resources Code) lay out its content requirements and conclude, "Where the PTEIR has adequately addressed an environmental impact, the PTHP need only include reference to the PTEIR provisions." The implementation mechanism is a checklist to be developed in each PTEIR to address site specific impacts. The checklist indicates mitigation measures to be applied in all areas of resource protection addressed in the PTEIR for individual and cumulative effects, and to show that the operations proposed in the PTHP are consistent with the types of projects analyzed within the approved PTEIR.

The PTEIR remains effective as long as there is no significant change in resource conditions. The subsequent PTHP should be limited to that area on which timber operations normally will be completed in one 12-month period, but in no case will it extend beyond 36 months. The PTHP and associated checklist become the primary mechanism for determining the continued adequacy of the PTEIR.

If the proposed timber operations are found to be inconsistent with the project as described in the PTEIR or could result in significant new environmental impacts, one of the following three options will be adopted:

- the proposed operations will be modified to be consistent with the project described in the PTEIR,
- a supplemental CEQA document will be prepared, or
- a conventional THP will be prepared.

Project Location and Characteristics

The Meadow Vista Community Plan establishes the policy framework for retaining a predominantly rural lifestyle while maintaining a holding capacity of 2,988 dwelling units and a population of 7,471. The current population is approximately 5,000. The plan area is approximately 6,980 acres bounded by the Bear River to the northwest, the Naturewood subdivision to the north, the Meadow Gate Road area to the east, and Christian Valley to the south.

The area is typified by rolling hills and meadows, as well as pine and oak woodlands. Riparian habitat is located along Orr and Wooley Creeks and along a number of intermittent streams. A large portion of the plan area drains to Combie Lake on the Bear River.

The area's elevation ranges from 1,650 feet to 2,050 feet. Land uses are predominantly open space and rural residential with scattered mining, agricultural, and commercial uses. The plan area is close to I-80 and provides an attractive residential community for commuters to Auburn, south Placer County, and the Sacramento region. Figures 1-1 and 1-2 show the regional and specific location of Meadow Vista.

Fire suppression practices combined with a lack of vegetation management have allowed a fuel bed of leaves, pine needles, down woody material, dead trees, limbs, and brush to build up adding to the chance of fires spreading more rapidly, including spread from burning embers. Due to lack of fire, the forest now consists of an ever growing thick brush-oak-pine fuel type that has far greater amounts of fuel than were available to pre-settlement or historic wildfire. An increased risk of fire ignition has developed over the past 50 years due to the introduction of rural-urban zoning regulations that permit one and two-acre parcels in this highly flammable and hazardous fuel area. With increased numbers of people come increased sources of fire ignition .

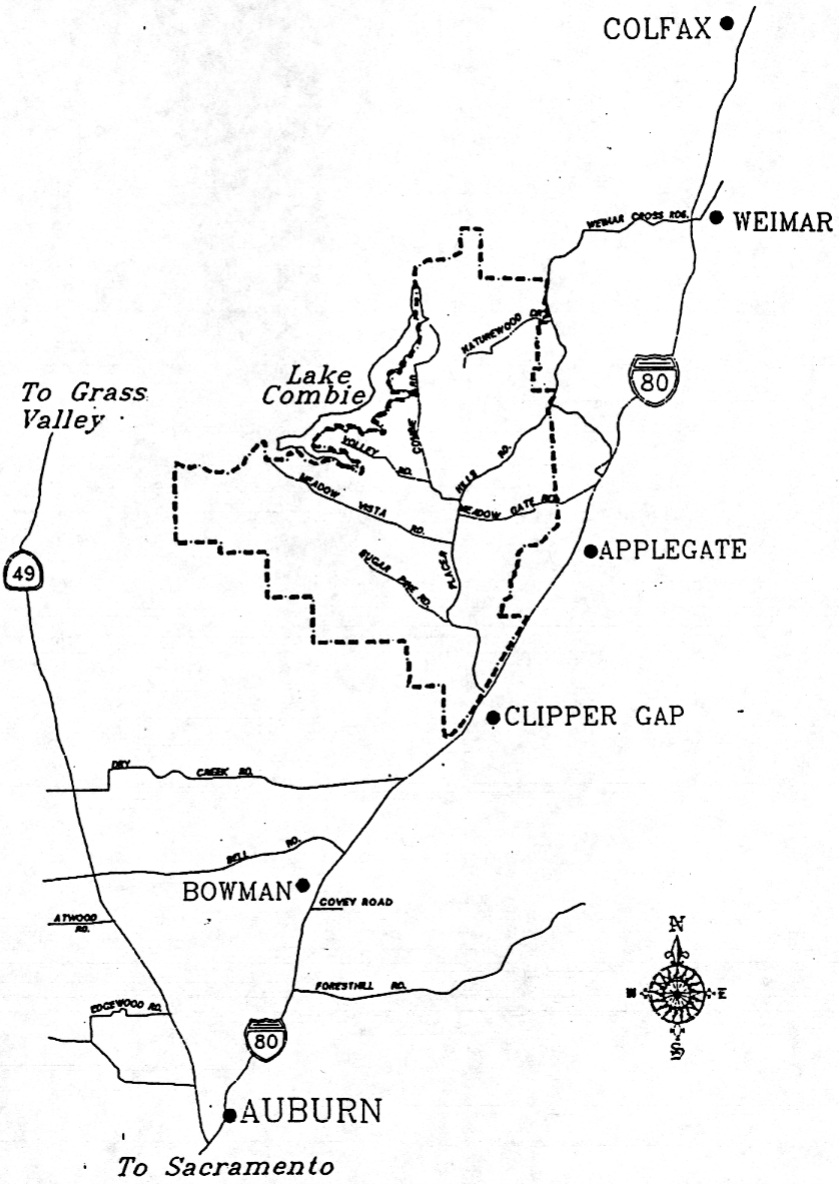
CDF has updated its statewide *Fire Plan*; in turn, local Ranger Units within CDF will update their own fire plans. As part of the Nevada Yuba Placer Ranger Unit Pre-Fire Management Plan, a system of shaded fuelbreaks along existing roads has been designed to decrease potential fire danger in the Meadow Vista community. The fire plan identifies the need to manage vegetation to help achieve a variety of goals that include area fire protection, defensible space around residences, and healthy forests that can be perpetuated into the future.

Managing existing vegetation could involve to some degree the commercial harvesting of trees, whether to remove dead or dying trees, trees posing a hazard for fire protection, or those suffering from insect/disease problems. Private landowners may be able to harvest trees with commercial value to generate revenue for proper forest fuels management and other purposes.

In addition to addressing environmental effects of fuel load reduction provisions of the Meadow Vista Community Plan and the Nevada Yuba Placer Pre-Fire Management Plan, this document includes analysis of the potential impacts of the fuel management projects that are a part of the "Proposition 204 Coordinated American River Watershed Health Improvement and Monitoring Project," within the Meadow Vista community plan area. The State Water Resources Control Board has awarded $1,000,000 to the American River Watershed Group under the Safe, Clean, Reliable

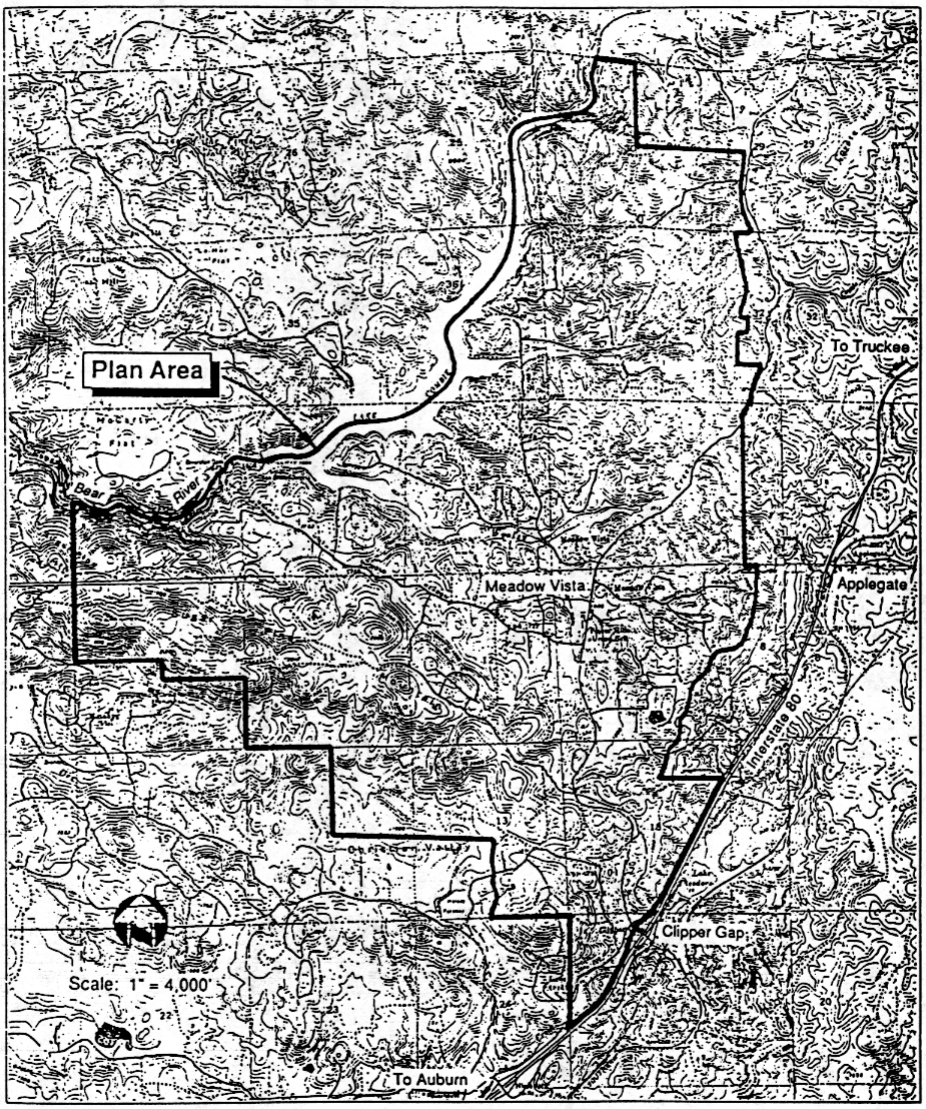
Meadow Vista Vegetation Management Project
PTEIR

Figure 1-1: Regional Location



Meadow Vista Vegetation Management Project
PTEIR

Figure 1-2: Specific Location



1-6

Water Supply Act (Proposition 204) and the Delta Tributary Watershed Program (Delta Program). The funds, matched by $1,731,000 in personnel and services by participating agencies, are to be used over a three-year period for specific projects within the American River Watershed in Placer County.

The emphasis of the Proposition 204 projects will be reducing fuel loading from the watershed; improving water quality by reducing the potential for large damaging fires; restoring the watershed to healthier conditions to improve both water yield and water quality; developing cooperation among all stakeholders in the watershed; and encouraging voluntary cooperation of landowners to participate in the effort. The project includes a monitoring program so that effects on wildlife, fuel loading, and water and soil quality can be tracked and used to guide future activities. The Proposition 204 project will be carried out in several areas within the American River Watershed including Foresthill, Meadow Vista/Applegate, Sugar Pine, and Rim-Hell Hole. A portion of this area includes the Meadow Vista community plan area.

Environmental effects of the Proposition 204 fuel reduction projects within the Meadow Vista area are discussed in this document and are closely related to those activities which may be carried out under the PTEIR process. The project area for the Meadow Vista portion of the Proposition 204 project is the same as that defined for this PTEIR and discussed later in this section. Prior to any activity within the balance of the American River Watershed under the Proposition 204 project, additional environmental clearance will be required.

Specific fuel reduction objectives of the Proposition 204 project over the three year project period within the Meadow Vista community are:

- construct 9.0 miles of shaded fuel breaks;
- inspect 2,900 existing housing units for defensible space requirements under PRC 4291; and
- reduce fuel loading using defensible space and defensible landscape prescriptions

These projects will be accomplished by a consortium of local, state and federal agencies and local landowners using a combination of harvesting techniques and disposal methods including burning, chipping, and masticating.

The other components of the Proposition 204 program - the Biomass Exchange Project and the Public Education Project - are not addressed in this PTEIR.

The primary fuel reduction programs discussed in the PTEIR, and areas where they will occur, are:

Defensible Space. Defensible space is that area between a house and an on-coming wildfire where vegetation has been modified to reduce wildfire threat and allow firefighters to safely defend the house. Often times, defensible space is a backyard, an adjacent lot, or a community greenbelt. The purpose of defensible space is to reduce the wildfire threat to a home and forest canopy through appropriate modification of vegetation and surface fuels and to be able to save the home, the improvements and the forest habitat. For owners of parcels larger than about four acres, areas beyond the individual home defensible space lie within the defensible landscape zone and defensible space techniques can be practiced to enhance the forest health and protect the Meadow Vista forest habitat.

In 1963, the State enacted Public Resources Code 4291 to establish minimum requirements for vegetative clearance to reduce structural exposure to fire; to give firefighters a reasonable chance of saving structures; and to prevent structural fires from becoming forest fires. PRC 4291 requires a 30-100 foot minimum defensible space around all buildings and is monitored and enforced by CDF. In Meadow Vista, the Placer Hills Fire Protection District has enacted two ordinances to meet PRC 4291 at the onset of new construction by requiring 30 feet or better of vegetation management, depending on the building site, and removal of slash at the time the foundation is completed.

For the purpose of this PTEIR, defensible space is considered to extend to up to 200 feet from an approved and legally permitted structure that complies with the California Building Code. However, this maximum distance is to be limited to a lesser distance where application of defensible space treatments to that lesser distance will provide an adequate level of defensible space protection to the structure. Factors such as slope, fuel or vegetation types, and structure configuration and materials are important determinants of the needed defensible space clearance.

Shaded Fuelbreaks. A fuels management strategy that protects human life, communities, and resources includes the establishment of "shaded fuelbreaks" at key locations. Shaded fuelbreaks involve the selective removal of brush and trees to open up the canopy and remove fuel on the forest floor along roadways and ridge lines, generally for a distance of 50-300 feet from the centerline. They will help reduce or halt the spread of wildland fires, thus reducing damage to forested watershed ecosystems and the people and structures found within these ecosystems.

Tree spacing in fuel break areas must allow for effective penetration to ground level of aerial dropping of fire retardant. In contrast to historical fuelbreaks that removed all vegetation, shaded fuelbreaks will only remove a portion of the existing vegetation.

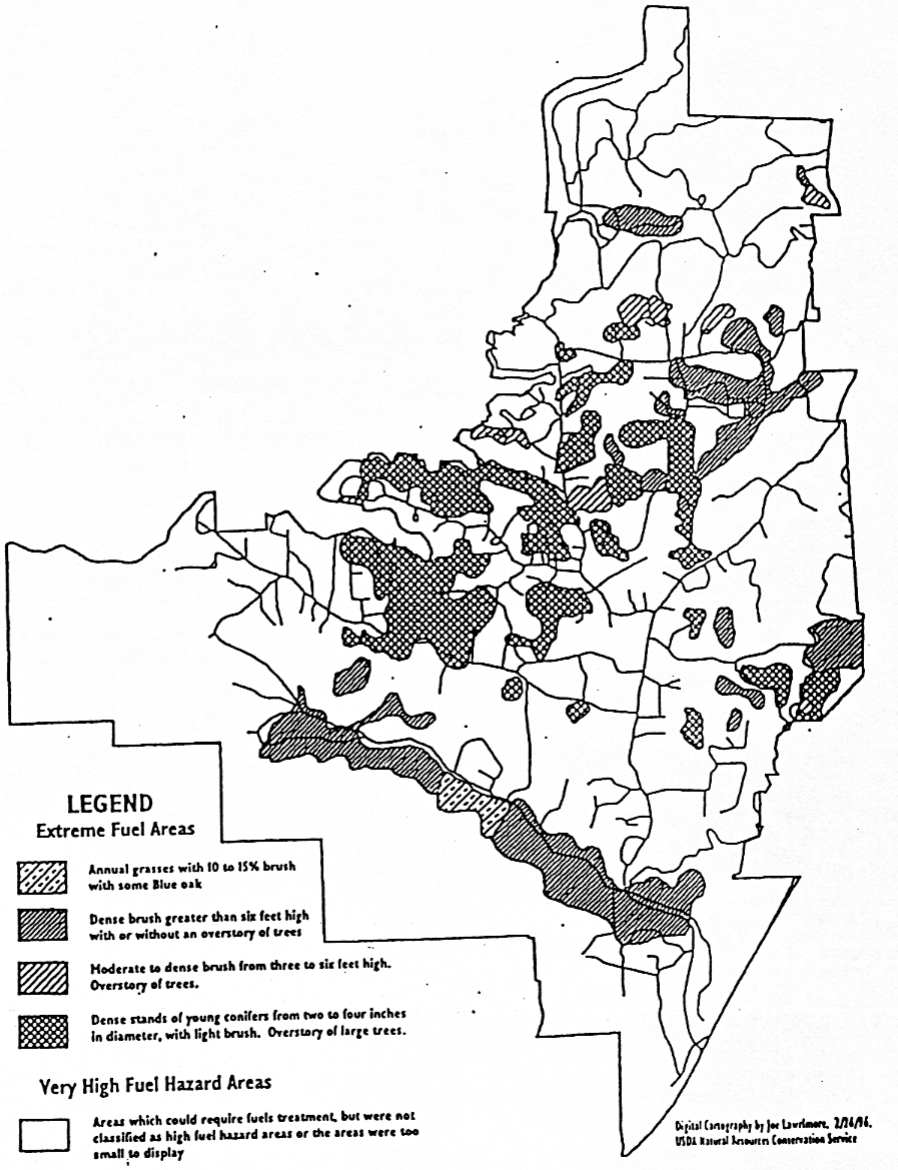
Fuel loading data obtained through the use of the Geographical Information System (GIS) system by the Natural Resources Conservation Service (NRCS) has helped the Placer Hills Fire Protection District propose a basic community wide fire defense fuelbreak system and prioritize fuel reduction treatment areas. Figure 1-3 illustrates the general areas in Meadow Vista where Extreme Fuel Loading is found. Figure 1-4 shows proposed shaded fuelbreaks illustrating which road-side shaded fuelbreaks are critical in breaking up fuel continuity throughout the community. These road corridors will provide ingress for fire apparatus and safer egress of citizens during evacuation from large wildland fires.

The Winchester planned development, approved within the Meadow Vista area in 1996, contains a system of shaded fuel breaks where the project abuts local roads. These fuelbreaks were approved by CDF and Placer County and include Sugar Pine Road and Placer Hills Road. Within these areas, vegetation will be managed and thinned in a fashion similar to projects undertaken pursuant to the PTEIR. The Winchester fuelbreaks, while part of the community fuelbreak system identified in the fire plan for the Meadow Vista community, are the responsibility of the Winchester developer and the specific potential impacts of the fuelbreak system have been discussed in the Final EIR prepared for the Winchester project. Individual projects within the Winchester development can fall under this PTEIR and the PTHP process.

Defensible Landscape. These landscapes, mostly forested, are the remaining areas of Meadow Vista that do not fall within defensible space or shaded fuelbreak areas. They are generally located away from human habitation or areas with significant human use and do not require intense fuel treatments due to their distance from the more intensely used defensible space and shaded fuelbreak areas. Such landscapes can benefit, however, from maintaining vegetation in a healthy condition and breaking up the continuity of heavy fuel load areas. In many areas, trees occur in dense, overcrowded stands where canopies are touching or even interwoven. Not only are these stands at times unhealthy, they also represent a potentially high fire danger due to their horizontal and vertical continuity that could lead to uncontrollable crown fires. In these cases, poorer quality trees need to be thinned out and remaining vegetation better spaced. Depending on the situation, limbing of lower branches may disrupt fuel continuity if tree spacing is otherwise adequate, or patches of brush may be removed if they pose as significant fuel hazard.

Meadow Vista Vegetation Management Project
PTEIR

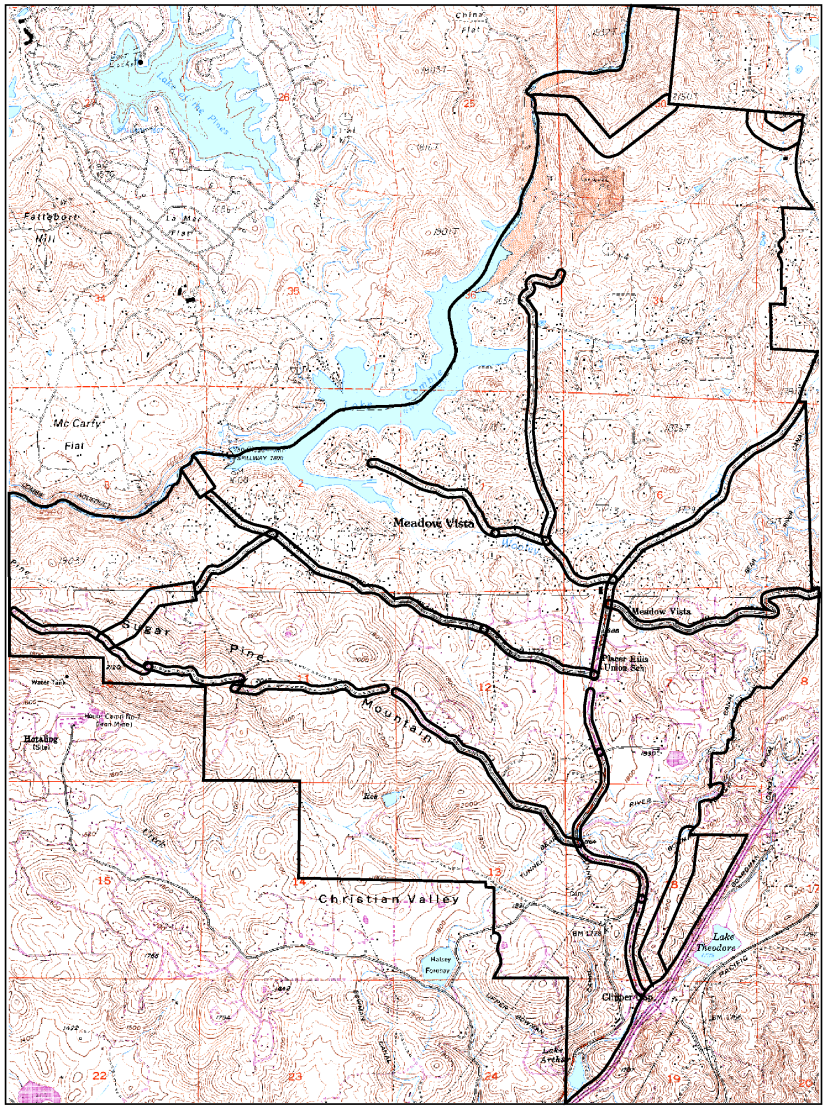
Figure 1-3: Vegetative Fuel Loading



1-10

Meadow Vista Community
PTEIR

Figure 1-4: Shaded Fuel Breaks



Planning Boundary

Fuel Breaks

0.5 0 0.5 Miles

Scale 1" = 2,500'

Source: Fire and Resource Assessment Program of the California Department of Forestry and Fire Protection

No matter the prescription used, resulting debris will need to be treated if it poses an unacceptable fire risk. Treatment of debris may include lopping light slash down to ground level to stabilize soil or prevent erosion; spreading out debris concentrations over a larger ground area; leaving debris in place to stabilize soil; chipping debris and blowing it back in place; debris removal; or piling and burning concentrations of slash or brush (burning to be a last resort).

Definitions of Silvicultural Systems

California State Board of Forestry regulations describe timber harvest systems based on the type of stand of trees and set minimum tree re-stocking standards that must be met after harvesting is completed (14 California Code of Regulations, 933 *et seq.*). In general, the harvesting systems are:

1. *Clearcutting*

   All trees are removed and the area is prepared and replanted immediately with tree seedlings.

2. *Shelterwood Harvest Systems*

   Shelterwood Preparatory Step: 40-60% of the mature trees are removed to prepare for reproduction of the next generation of trees.

   Shelterwood Seed Step: 4-8 mature healthy trees per acre are left standing as natural seed trees to establish the next generation of trees. Usually occurs more than five years after a Shelterwood, Preparatory Step harvest.

   Shelterwood Removal Step: After the next generation of trees is established, the remaining overstory of mature trees is removed to allow full sunlight and spacing to new trees.

3. *Seed Tree Harvest Systems*

   Seed Tree Seed Step: 4-8 mature healthy trees per acre are left standing as natural seed trees to establish the next generation of trees.

   Seed Tree Removal Step: After the next generation of trees is established, the remaining overstory of mature trees is removed to allow full sunlight and spacing to new trees.

4. *Selection Harvest Systems*

Selection: 20% to 40% of existing trees are removed. Harvested trees are of variable size but spacing is more open to allow for future growth.

Group Selection: Small openings are created by harvesting all trees such that the area is large enough for tree species requiring complete sunlight to reproduce. The opening can be up to 2.5 acres in size, but can cover no more than 20% of the selectively harvested area.

Transition: A stand of fairly uniform trees is partially harvested (30-50%) to develop small openings that will result in a stand of trees with a diversity of size and age. Usually, this harvest must be done several times to achieve long-term goals.

5. *Commercial Thinning*

Young trees in dense stands competing for space and sunlight are harvested; 20% to 70% of the trees may be thinned to allow remaining trees enough growing space and sunlight to reach maturity.

6. *Sanitation/Salvage Harvests*

Only those trees that are dead, dying, or that have severe structural problems are removed.

7. *Special Treatment Area Harvests*

Harvests near wild and scenic rivers; national, state, regional, county, or municipal parks; scenic highways; and critical habitats may not significantly impact the resources for which the area was designated. Generally, some form of Selection Harvest is required.

8. *Rehabilitation Harvests*

In areas were numbers of trees do not meet minimum levels required before harvesting is usually considered, harvesting may be allowed if the area is immediately replanted with at least 10 new seedlings for each tree removed.

9. *Fuelbreak/Defensible Space Harvest*

   Harvesting of trees where the objective is to space-out the remaining vegetation for better fire prevention purposes. This harvest system is not intended for tree regeneration, or to improve the growth of existing trees, but rather is strictly for fire protection purposes.

10. *Alternative Prescription*

    When a stand of trees does not meet the definition of any standard forest harvesting system due to the types and distribution of trees present, harvests can still occur but must be closely related to an applicable silvicultural system and meet minimum post-harvest stocking standards of that system.

The following silvicultural systems only are to be used in the Meadow Vista Vegetation Management Project for purposes of the PTEIR. All other harvest methods are prohibited within the PTEIR framework and would require submittal of a Timber Harvest Plan and standard review under the Forest Practice Act.

Shaded Fuelbreaks

1. Fuel Break/Defensible Space harvest

Defensible Space

1. Fuel Break/Defensible Space harvest

2. Sanitation/Salvage

Defensible Landscapes

1. All harvest systems except clearcutting. When using other evenaged management prescriptions, there must remain at least eight 18" DBH or larger countable trees per acre.

2. Seed Tree Seed Step or similar alternative prescriptions are permissible. At least twice the number of minimum leave trees specified in the Forest Practice Rules must be retained.

Tonnage Estimates In the Meadow Vista Community

It is estimated by the CDF Fire and Resource Assessment Program that up to 50 dry tons of total available vegetation fuels exist on average per acre in the Meadow Vista community. In a catastrophic fire involving the entire Meadow Vista area, it is estimated by CDF that up to 349,000 tons of vegetation would burn and up to 1/3 of all houses in the community could be lost, or 640 houses.

If all parcels within the plan area receive the vegetation management treatments outlined in the PTEIR, approximately 136,250 dry tons (20 tons per acre) of fuel will be treated. Treatment could be by chipping/masticating, removal, or in limited cases, burning. This figure was calculated by using the California Wildlife Habitat Relations (CWHR) vegetation type acreages to achieve the defensible goals. Shaded fuelbreaks areas had 15 dry tons/acre of vegetation treated, while defensible space areas had 21 tons/acre and defensible landscape areas had 19 tons per acre.

If all potential projects are completed, a residual of 30 dry tons of vegetation per acre will remain. Of this amount, 10 tons would remain on the ground while 20 tons is in the upper boles and limbs of trees. These upper reaches of vegetation would remain safe from wildfire as ladder fuels would be eliminated and spacing increased to prevent flames from reaching them.

Long-term maintenance will require that an additional two tons/acre of organic fuel be treated every 3-6 years. Treatment would be chipping or removal.

Burning Restrictions as Part of the PTEIR/PTHP Process

The Meadow Vista Vegetation Management Project contains an important provision which will significantly reduce air emissions and the nuisance effects of smoke. Burning of slash and harvested debris will be strictly controlled when undertaken within the PTEIR process. Burning will be allowed only if other methods of disposal are unavailable or prove infeasible, or when denial of burning would pose a risk of imminent and substantial economic loss. Limited burning which does take place would be in compliance with burn regulations established by the Placer County APCD, and under permit from CDF, if applicable. This decision has been made due to identification of smoke and associated air quality effects as a leading environmental concern in the Meadow Vista Community. As a result, disposal of waste under a PTHP will be encouraged to coordinate with an appropriate chipping program.

Other disposal alternatives include mastication and re-spreading on the site, and disposal at the Western Regional Sanitary Landfill Multiple Resource Facility (MRF). The MRF operates a greenwaste program to create compost. A third alternative may evolve as the Proposition 204 biomass program identifies opportunities for biomass use of greenwaste.

A chipper program is operated by the Placer County Fire Department and coordinated by CDF from its station in Auburn. While Proposition 204 projects are eligible for this chipper program, areas commercially harvested under the State's Forest Practice Rules are not. The priorities of the chipper program are:

- the shaded fuel break construction program
- the PRC 4291 inspection program (defensible space)
- community, associations, neighborhood support
- individual properties as time and scheduling allow

Under this chipper program, all chipping will occur along the road frontage only, allowing the crew to work from the public right-of-way. All material to be chipped must be place along the edge of public/private property. All material will be blown back onto the property to provide cover and erosion protection.

Coordination with the chipper program will be by the property owner. Private contractors or other public agencies may also have chippers that could be used in the PTEIR process.

Chemical Treatment

Use of pesticides, herbicides, and fertilizers are not proposed as part of the PTEIR process and the potential environmental effects of their use is not analyzed.

Intended Uses of the PTEIR

The objectives of this PTEIR are to analyze and disclose to decision makers and the public the environmental effects of implementing the proposed project; to demonstrate to the public that the proposed project will protect the environment; to identify mitigation measures that will reduce or avoid significant environmental impacts that could result from project implementation; and to evaluate a reasonable range of alternatives to the proposed project.

The Meadow Vista Community Plan Final EIR was certified as adequate with adoption of the Plan. That document discusses impacts related to wildland fire suppression and proposes adoption of policies contained in the Plan to reduce these impacts. This PTEIR is tiered to the Meadow Vista EIR which is incorporated by reference. The PTEIR is a Subsequent EIR in this instance, using information in the Meadow Vista EIR as a basis for analysis. A subsequent EIR is defined in Guidelines Sec. 15162 and is prepared when substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant effects. Mitigation measures in this document are based on current Forest Practice Rules and new measures developed specifically for the Meadow Vista area.

The PTEIR will be used by CDF to review proposed individual program timber harvest plans undertaken in conformance with the mitigation measures in the PTEIR. The PTEIR contains a checklist to measure the consistency of individual projects with the overall program; this checklist will be used by CDF personnel as they evaluate these individual projects. The checklist is attached as Appendix A. The monitoring program is an important component of the PTEIR process. It ensures that the Forest Practice Rules and mitigation measures contained in the PTEIR are in fact carried out in the subsequent PTHP on individual projects.

Impacts covered in the PTEIR include:

Land use and Planning
Geology and Soils
Hydrology and Water Quality
Visual Resources
Biological Resources
Cultural Resources
Noise
Air Quality
Traffic
Fire Protection

Known Areas of Controversy

CEQA Guidelines (Section 15123) require an EIR to identify areas of controversy known to the lead agency, including issues raised by agencies and the public. Several areas of controversy related to implementation of the vegetation management project were raised in the Initial Study (Appendix B), the Notice of Preparation (NOP) for the EIR (Appendix C), and a scoping meeting held in Meadow Vista. These issues include

potential impacts to wildlife, air quality (smoke), and aesthetics.

Chapter 2. Land Use and Planning

Land uses in the Meadow Vista Plan area include residential, commercial, industrial and open space. The Meadow Vista Community is typified by rolling hills and meadows, as well as pine and oak woodlands. Elevations range from 1,650 feet to 2,050 feet. Land uses are predominately rural residential, with the following notable exceptions; the Chevreaux rock quarry located on the Bear River at the northern end of the Plan area, a large agricultural area also at the northern end of the Plan area, a partially developed highway services district located at the interchange at I-80, and the limited commercial services district and institutional uses located in the center of the Plan area.

A central downtown area is adjacent to Placer Hills Road between Meadow Vista Road and just north of Combie Road. This neighborhood commercial area includes a tri-level complex with a supermarket, video store, pet supply store, sundries store, and several professional office suites. A gift shop, former real estate office and dentist office are also in the village center. Most of the services in the Plan area are located along Placer Hills Road between Combie Road and north of Sugar Pine Road. These services include a hardware store, automobile repair, barber shop, coffee shop, travel store, carpet store, bank, and service station. Institutional uses include four schools, a fire station, landfill station, post office, and water district offices and yard. Except for the transfer station, most of these services also are located between Combie Road and north of Sugar Pine Road.

According to the Meadow Vista Community Plan, 79% of the plan area is zoned for residential use; 28% of the parcels are zoned for less-than-one-acre lots, while 41% of the parcels are zoned for lots of 2.3 to 10 acres in size. The remaining 31% of the area is in lots of 1.0 to 2.3 acres in size.

Existing Plans

On August 16, 1994, the Placer County Board of Supervisors adopted the Placer County General Plan (PCGP), which establishes an overall framework for development of the County and protection of its natural and cultural resources. Land use goals and polices contained in the PCGP are applicable throughout the County, except where County authority is preempted by cities within their corporate limits. The Meadow Vista Community Plan (MVCP) provides a more detailed focus on a specific geographic area.

The goals, policies, standards, and implementation programs contained in the MVCP repeat the goals, policies, standards, and implementation programs contained in the PCGP which pertain to the MVCP area. In addition, other goals, policies, and implementation programs in the MVCP go further to supplement and elaborate upon (but not supersede) those contained in the PCGP to address specific community concerns and issues.

IMPACTS

Criteria for Determining Significance

The State CEQA Guidelines, Appendix G, provide criteria for determining significant effects on the environment. These criteria have been modified based on the proposed project's characteristics. The project will normally have a significant effect if it will:

- Conflict with adopted environmental plans and goals of the community where it is located

Relevant Community Plan Goals and Policies

The Meadow Vista Community Plan contains the following land use policies, which address shaded fuel breaks, defensible space, and the "community forest" with the objectives of maintaining forest sustainability and health, maintaining soil productivity and water quality, enhancing the quality and diversity of wildlife and fish habitats, and enhancing the aesthetic quality of the landscape. Policies which address other aspects of fire hazards are listed and addressed in relevant sections of the EIR (i.e. air quality, fire protection).

Policy 1.K.5. The county shall require that new development on hillsides employ design, construction, and maintenance techniques that:

a. Ensure that development near or on portions of hillsides does not cause or worsen natural hazards such as erosion, sedimentation, fire, or water quality concerns.

Policy 1.K.8. The County shall balance the desire to maintain heavily vegetated corridors along circulation routes to preserve their rural nature and perceived value as natural noise buffers with the need to reduce fuel loads (both the volume and density of flammable vegetation) along fire escape routes to increase safety for emergency fire equipment and evacuating civilians, to provide a point of attack or defense from a wildfire, and as fuel or fire breaks.

Policy 5.H.11. The County shall encourage the modification of vegetation around structures and development to reduce radiant heat along fire escape routes providing for the safety of residents and fire fighting personnel. Fuel modification will reduce the intensity of a wildfire by reducing the volume and density of flammable vegetation. These areas shall provide (1) increased safety for emergency fire equipment and evacuating civilians; (2) a point of attack or defense from a wildfire; and (3) strategic siting of fuel breaks, fire breaks, and greenbelts.

Policy 5.H.12. The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for a fire safe community, defensible space fire-resistant vegetation, cleared fire breaks and fuel breaks, or a long-term comprehensive fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas of Meadow Vista.

Policy 9.A.3. The County shall support the conservation of a healthy forest, including outstanding areas of native vegetation, including, but not limited to, open meadows, oak woodlands, riparian areas, and stands of Sugar Pines.

Policy 9.A.11. The County shall support the continued use of prescribed burning and other methods of brush suppression to mimic the effects of natural fires to reduce fuel volumes and associated fire hazard to human residents and to enhance the health of biotic communities.

Policy 9.E.2. The County shall require that new development be designed and constructed to protect, enhance, rehabilitate, and restore the

following types of areas and features as open space to the maximum extent feasible:

f. To coordinate open space desires with the fuel break system need for public safety fire protection and access to manage wildfires.

Impact Analysis

This impact analysis identifies the consistency of the Vegetation Management Project with the MVCP and the implications of creating defensible space, shaded fuel breaks, and a healthy forest.

The Meadow Vista Community Plan contains several policies which relate to and support vegetation management to reduce fire hazard. These policies deal not only with standards for new development, but with existing developed areas as well. The Vegetation Management Project, which includes the commercial harvest of timber in association with development of shaded fuel breaks, defensible space, and defensible landscape, is an implementation strategy for community plan policy.

Without the Vegetation Management Project, fuel load reduction will still occur, but at a slower rate. It is also likely that the promotional activities associated with the PTEIR process by CDF, the Placer Hills Fire Protection District, and other resource agencies will facilitate a more comprehensive fuel load reduction program in the community than would occur without the project.

The Meadow Vista Vegetation Management Project is generally consistent with the policies previously listed. These policies, identified by Meadow Vista residents and adopted by the Board of Supervisors, place a high priority on creating a fire safe community.

There are, however, some inherent conflicts in these policies as well as others contained in the Meadow Vista Community Plan. Following are policies of the plan which appear to conflict with fuel load reduction objectives if literally implemented.

Policy 1.B.2 The County shall encourage the retention of natural features as buffers between different potentially incompatible uses as well as serving to preserve the rural character of the area.

Policy 1.I.1 The County shall require that development be planned and designed to avoid areas rich in wildlife or of a fragile ecological nature (e.g. areas of rare or endangered plant species, riparian areas, Sugar Pine stands and Valley Oak stands). Alternatively, where avoidance is infeasible or where equal or greater ecological benefits can be obtained through off-site mitigation, the County shall allow project proponents to contribute to off-site mitigation enforced in lieu of on-site mitigation.

Policy 1.I.2 The County shall encourage the careful management of natural open-space/passive recreation land within the Plan area to ensure that vegetation, soil, wildlife, and visual qualities are protected and, where necessary, enhanced.

Policy 1.I.3 The County shall identify those areas where greenbelts of linear open spaces should be preserved in order to enhance the development areas and to maintain clear boundaries for the Meadow Vista community.

Policy 1.L.2 The County shall protect and enhance scenic corridors through such means as design review, sign control, undergrounding utilities, scenic setbacks, density limitations, planned unit developments, grading and tree removal standards, open space easements, and land conservation contracts.

Policy 1.K.1 The County shall require new development in scenic areas (e.g. river canyons, lake watersheds, scenic highway corridors, ridgelines, and steep slopes [especially Sugar Pine Mountain]) is planned and designed in a manner which employs design, construction, and maintenance techniques that:

a. Avoid locating highly visible structures along ridgelines and steep slopes;

b. Incorporate design and screening measures which utilize natural landforms and vegetation for screening structures, access roads, building foundations, and cut and fill slopes consistent with the needs of the State Fire Safe and Fire District Defensible Space programs.

Placer County Tree Ordinance

Because it involves commercial timber harvest, the proposed project is exempt from the Placer County Tree Ordinance, per Ordinance sections 36.330B, D, and F. However, the intent of the Tree Ordinance to maintain the long-term forested appearance is consistent with the vegetation management and fire hazard reduction goals of the Meadow Vista Community Plan and this PTEIR.

The greatest conflicts between the proposed PTEIR and the above policies arise when fuel load reduction measures are applied in scenic or wildlife areas. Without careful identification of resources and application of adequate mitigation measures, impacts to scenic and wildlife resources could be significant (see *Visual Resources* and *Biological Resources*).

The implementation of policy requires the careful balancing of resource objectives (see Policy 1.K.8). It should be remembered that fuel reduction measures can be carried out by private property owners with little or no control by regulatory agencies unless green trees are removed for commercial purposes. In that case, CDF rules and regulations apply. The PTEIR is intended to address fuel reduction practices that may include limited commercial tree removals and provide a higher level of analysis and resource protection through application of Forest Practice Rules and mitigation measures than might otherwise occur.

Where policy conflicts occur, the policy with fewer significant environmental affects generally takes precedence. The PTEIR process provides the analysis of resource impacts and the balancing of policy objectives. To this extent, the impacts of potential policy conflicts are reduced to a less than significant level.

MITIGATION

No mitigation is required.

Chapter 3. Geology and Soils

The Plan area is characterized by long, narrow valleys with moderate to steep sloping hillsides. Topography ranges from gently rolling and nearly level land to steep slopes. Elevations range from 1,650 feet to approximately 2,050 feet above sea level.

Figure 3-1 is a generalized slope map that displays slopes in three categories: 0%-5%, 5%-15%, and 15% and above. As shown, just over one-half of the site has slopes greater than 15%, with the other one-half being less than 15%. Both categories are scattered throughout the Plan area.

Geology

Geology is characterized by granodiorite rocks, metavolcanic flows, metavolcanic tuffs, and metashales. Information for the following is based on the Handbook of Environmental Geology (Placer County Planning Department 1976).

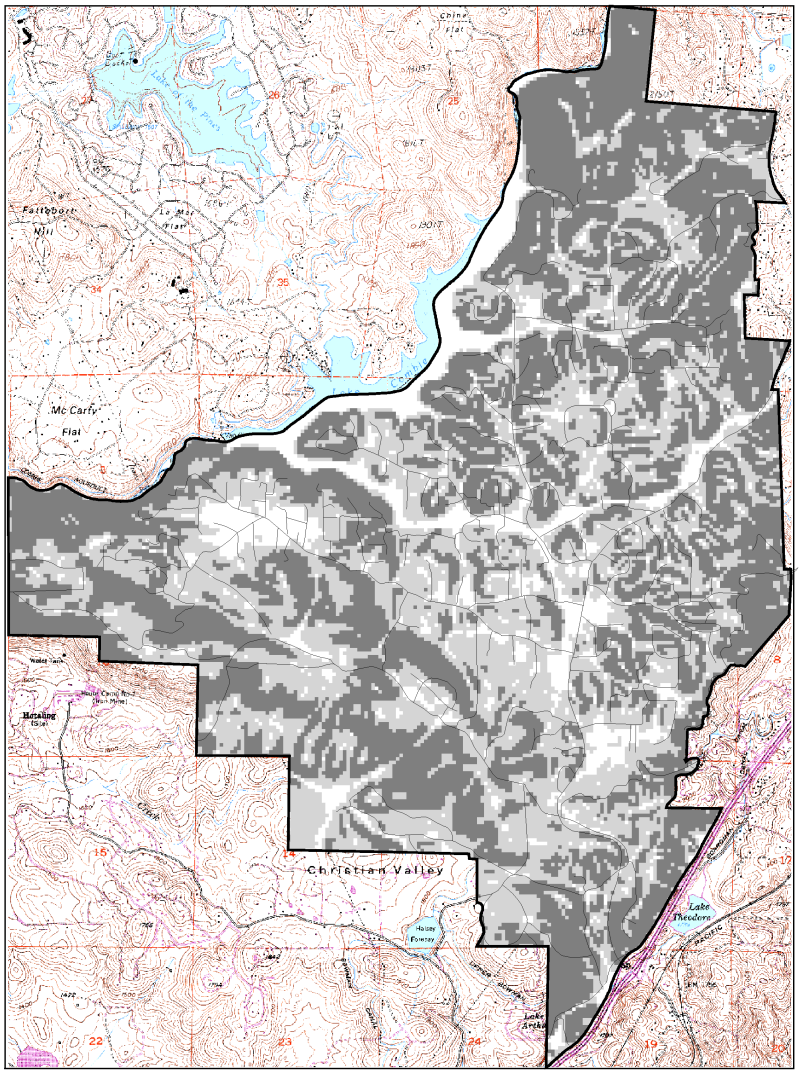
Granodiorites (grg). Granitic rocks occur at Sugar Pine Mountain over a 3-mile circular area extending from 0.5 to 3.5 miles west of Meadow Vista. A majority of the rock is moderately weathered at the surface and is therefore a limited source of decomposed granite. Outcrops occur extensively on steep slopes. The moderately weathered material is relatively stable on steep cuts. Soils over this feature are relative thin. Decomposed granitic rock located on steep slopes is susceptible to slumping and gullying from runoff.

Metavolcanic Flows (mvf) and Metavolcanic Tuffs (mvt). Metavolcanic flows consist of intensely weathered and fractured greenstone deposited by lava flows. These flows created rocks that are generally massive and show no bedding structure, although they are intensely fractured and deeply weathered. The rock is iron rich and produces thin, dark red, iron-rich soil. Where weathering has not penetrated deeply, the material may be suitable for quarrying and crushing for road base and aggregate.

Metavolcanic tuffs consist of soft, thin, platy, intensely weathered, and deeply weathered material that was originally deposited as volcanic ash. Metavolcanic tuffs occur as lenses within the metavolcanic flows. The bedding trends north-south and is vertical. Open cuts are highly susceptible to ravelling and shallow slips along bedding and fracture plans. Soil formed from this unit has shallow to moderate depths.

Meadow Vista Community
PTEIR

Figure 3-1: Generalized Slope Map



Metashales (msh). Metashales occur in the Plan area along I-80. In general, the rocks are soft and intensely jointed. This unit is subject to ravelling and shallow slips along fracture planes in open cuts.

Soils

The U.S. Natural Resources Conservation Service (NRCS) has mapped soil series and their associated units in the Plan area. Figure 3-2 illustrates these soil mapping units. The physical properties of the mapping units are generally similar, exhibiting only minor variations; therefore, for the purpose of this discussion, only a general description of the soil series (as defined by the NRCS) is presented.

Argonaut Soils. Argonaut soils are moderately deep (from 22 to 34 inches) and well drained, underlain by metamorphic rock on broad ridges and swales on foothills. Soil textures range from silt loams in the surface horizons to clay in the subsurface. These soils typically exhibit slight to moderate erosion potential, low shrink-swell potential in the surface horizon, and high shrink-swell potential in the subsurface horizon. Argonaut soils have severe restrictions for on site wastewater disposal systems due to slow percolation rates and shallow depth to bedrock. These soils have poor to fair ratings for crop and range land uses.

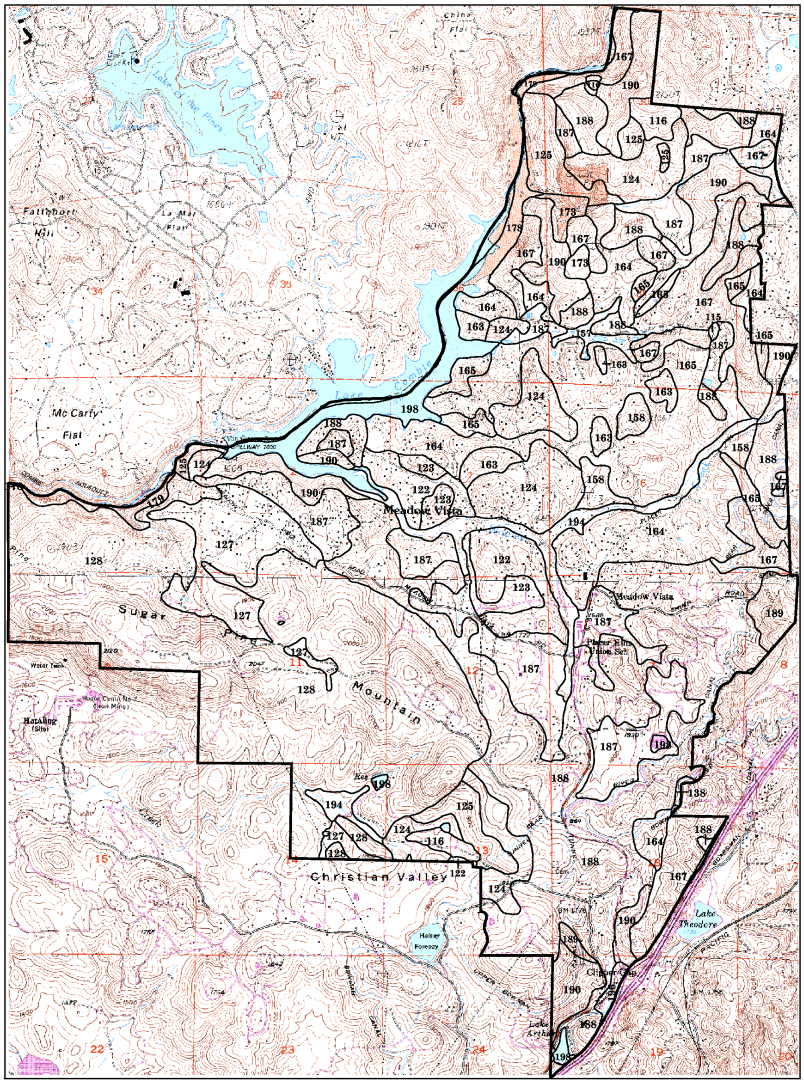
Auburn Soils. Auburn soils are shallow (from 12 to 28 inches deep) and well drained silt loams that are typically underlain by metamorphic rocks in foothill areas. These soils exhibit slight to moderate erosion hazard and low shrink-swell potential. Auburn soils have severe restrictions for on site wastewater disposal systems due to shallow depth to bedrock. These soils have a fair rating for crop and range land uses.

Boomer Soils. Boomer soils form on syenite in mountainous uplands. These soils are typically deep (from 50 to 72 inches) loams to gravelly clay loams with low to moderate shrink-swell potentials that exhibit slight to moderate erosion hazard. Boomer soils have severe restrictions for on site wastewater disposal systems due to shallow depth to bedrock, slow percolation rates, and steep slopes. These soils have a poor to fair rating for crop uses and have not been rated for range land uses. The Boomer loam (map unit 122) has been listed by the U. S. Department of Agriculture Land Inventory and Monitoring Project for the Placer County, Western Part, Soil Survey as prime farmland or farmland of statewide importance.

Meadow Vista Community
PTEIR

Source: Fire and Resource Assessment Program of the California Department of Forestry and Fire Protection

Figure 3-2: Soils Map



Soil Series

115 AUBURN-ARGONAUT COMPLEX, 2 - 15 %
116 AUBURN-ARGONAUT-ROCK OUTCROP COMPLEX, 2 - 15 %
122 BOOMER LOAM, 2 -15%
123 BOOMER LOAM, 15 - 30 %
124 BOOMER-ROCK OUTCROP COMPLEX, 5 - 30 %
125 BOOMER-ROCK OUTCROP COMPLEX, 30 - 50 %
127 BOOMER VARIANT STONY SANDY LOAM, 2 - 15 %
128 BOOMER VARIANT VERY STONY SANDY LOAM, 15 - 50 %
138 COHASSET COBBLY LOAM, 15 - 30 %
157 JOSEPHINE LOAM, 2 - 9 %
158 JOSEPHINE LOAM, 9 - 15 %
159 JOSEPHINE LOAM, 15 - 30 %
163 MARIPOSA GRAVELLY LOAM, 5 - 30 %
164 MARIPOSA-JOSEPHINE COMPLEX, 5 - 30 %
165 MARIPOSA-JOSEPHINE COMPLEX, 30 - 50 %
167 MARIPOSA-ROCK OUTCROP COMPLEX, 5 - 50 %
173 PITS AND DUMPS
178 RIVERWASH
179 ROCK OUTCROP
187 SITES LOAM, 9 - 15 %
188 SITES LOAM, 15 - 30 %
189 SITES LOAM, 30 - 50 %
190 SITES-ROCK OUTCROP COMPLEX, 15 - 30 %
194 XEROPLUVENTS, FREQUENTLY FLOODED
196 XERORTHENTS, CUT AND FILL AREAS
198 WATER

Planning Boundary

N

0.5 0 0.5 Miles

Scale 1" = 2,500'

FRAP

Josephine Soils. These deep soils (from 40 to more than 60 inches) are well drained and exhibit a slight to moderate erosion hazard and low to moderate shrink-swell potential. Josephine soils have severe restrictions for on site wastewater disposal systems due to shallow depth to bedrock and slow percolation rates. Josephine loams (map units 157 and 158) have been listed by the U.S. Department of Agriculture Land Inventory and Monitoring Project for the Placer County, Western Part, Soil Survey as prime farmland or farmland of statewide importance.

Mariposa Soils. The shallow to moderately deep Mariposa soils (from 15 to 35 inches) are well drained gravelly loams to gravelly clay loams with low shrink-swell potential and slight to moderate erosion potential. Mariposa soils have severe restrictions for on site wastewater disposal systems due to shallow depth to bedrock and steep slopes. These soils have a very poor rating for crop uses and have not been rated for range land uses.

Pits and Dumps. Pits and dumps are barren sand and gravel pits, refuse dumps, and rock quarries that exhibit highly variable physical properties.

Riverwash. Riverwash occurs in and along channels of the Bear River. The material is highly stratified stony and rocky sand.

Site Soils. The deep Sites soils (from 40 inches to more than seven feet) are well drained loams to clay that exhibit low shrink-swell potential and slight erosion potential.

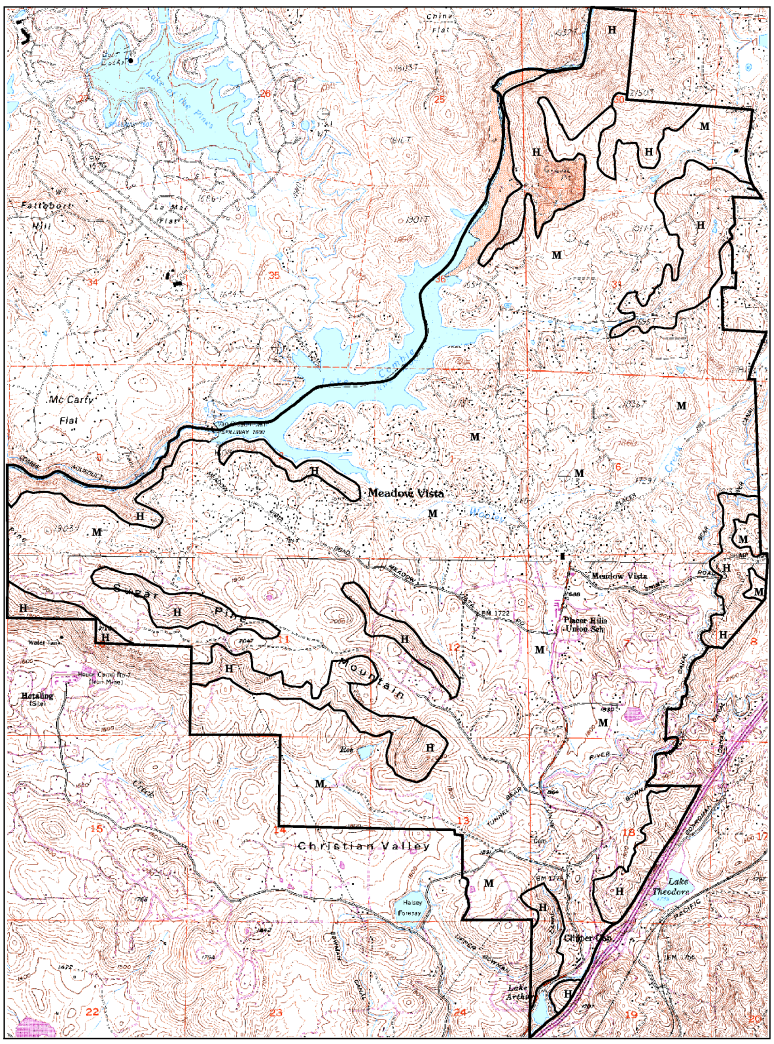
Xerofluvents. Xerofluvents consist of localized areas of frequently flooded loamy alluvium adjacent to stream channels. These soils are typically greater than 60 inches thick and exhibit low erosion hazard and low shrink-swell potential.

Soil Erosion

The degree to which erosion occurs depends on soil type, topography, land use, and vegetation. High-intensity rainfall will produce large amounts of overland flow, causing more erosion than gentle rains. Steep slopes cause runoff to move at high velocities and thus create greater erosion rates than gentle slopes. Vegetation growth will decrease the erosion rate because it reduces raindrop impact and puddling on the soil surface, along with the root systems of plants aiding soil stability. Figure 3-3 shows potential erosion hazards per Board of Forestry criteria.

Meadow Vista Community
PTEIR

Figure 3-3: Potential Erosion Hazard



Planning Boundary

Potential Erosion Hazard

0.5 0 0.5 Miles

Scale 1" = 2,500'

Source: Fire and Resource Assessment Program of the California Department of Forestry and Fire Protection

FRAP

The soils in the Plan area (some of which have steep slopes and loose textures) generally exhibit moderate erosion potential and are particularly susceptible to erosion when exposed on embankment faces and slopes. The effects of erosion range from nuisance problems to extreme cases where watercourses are downcut and gullies develop that can eventually undermine adjacent structures or vegetation.

IMPACTS

Criteria for Determining Significance

Significance criteria were developed from Appendices G and I of the State CEQA Guidelines and from professional practice. A project will normally have a significant impact if it will:

- Result in substantial disruptions, displacements, compaction, or overcovering of the soil;
- Result in substantial increase in wind or water erosion of soils, either on or off the site;

Relevant Community Plan Goals, Policies, and Implementation Programs

The Meadow Vista Community Plan includes various goals, policies, and implementation programs intended to protect the natural features of the Plan area, minimize geologic hazards, and protect soil resources.

Policies

9.K.4. The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.

9.K.5. In landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems; removal of vegetative cover; and steepening of slopes and undercutting the bases of slopes. [8.A.5.]

Impact Analysis

The Vegetation Management Project is consistent with and supports policies of the Meadow Vista Community Plan. Specific impacts of the project are discussed below.

Portions of the Plan area contain gently rolling hills, scenic ridge lines, and large rock outcroppings. The MVCP discourages development on slopes exceeding 30%; however, vegetation management and fuel load reduction activities in areas of steep slopes could increase the potential for unstable slope conditions and ground failure, potentially exposing people and property to geologic hazards. The State Department of Mines and Geology is part of the CDF's Review Team for PTHPs.

Vegetation removal can increase soil moisture levels by reducing transpiration rates. As soil moisture levels increase, frictional forces between bedding planes decrease, which increases the potential for landslides. Vegetation management and healthy forest activities for fuel load reduction projects would disrupt normal soil conditions and remove vegetative cover and the litter layer, exposing the soil to raindrops and overland flow which could increase erosion rates.

Soils in the Plan area exhibit a moderate to high erosion potential that, when combined with ground-disturbing activities could substantially increase the potential for wind and water erosion on exposed areas and could increase the potential for sedimentation of local watercourses and wetlands. Under this condition, there can also be a substantial reduction in soil organic matter, resulting in a loss of soil productivity.

Limited removal of woody vegetation on areas with moderate to high erosion hazard ratings would maintain sufficient cover and not substantially increase soil erosion or reduce soil productivity. Impacts in these areas are not considered significant.

The use of heavy equipment can destroy natural soil structure that minimizes erosion. The use of heavy equipment and construction of access roads have the potential to cause sedimentation and degradation of watercourses and wetlands.

California Forest Practice Rules Requirements

All applicable Forest Practice Rules will apply to any PTHP undertaken pursuant to this PTEIR. The following Rules are particularly relevant for geology and soils. As part of the project description, they will reduce many potential impacts to a less than significant level.

1. Map all known unstable areas or slides on the PTHP map submitted for review by CDF. (1092.9(1)(11)).

2. Heavy equipment shall not be operated on unstable areas. (934.2(d)).

3. Tractor roads shall be limited in number and width to the minimum necessary for removal of logs. When less damage to the resources specified in 14 CCR 934 will result, existing tractor roads shall be used instead of constructing new tractor roads. (934.2(c)).

4. Slash and debris from timber operations shall not be bunched adjacent to residual trees required for silvicultural or wildlife purposes, or placed in locations where they could be discharged into a Class I or II watercourse or lake. (934.2(e)).

5. Tractor yarding or the use of tractors for constructing layouts, firebreaks or other tractor roads shall be undertaken only during dry, rainless periods where soils are not saturated. (934.7(c)(1)).

6. Required waterbreaks shall be located to allow water to be discharged into some form of vegetative cover, duff, slash, rocks, or less erodible material wherever possible, and shall be constructed to provide for unrestricted discharge at the lower end of the waterbreak so that water will be discharged and spread in such a manner that erosion shall be minimized. Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks on roads and skid trails cause surface run-off to be concentrated on downslopes, roads or skid trails, other erosion controls shall be installed as needed to comply with Title 14 CCR 934. (934.6(f))

7. The following standards are applicable to the construction of waterbreaks:

a. All waterbreaks shall be installed no later than the beginning of the winter period of the current year of timber operations, except as otherwise provided for in the rules.

b. Waterbreaks shall be constructed concurrently with the construction of firebreaks and immediately upon conclusion of use of tractor roads, roads, layouts, and landings which do not have permanent and adequate drainage facilities, or drainage structures.

c. Distances between waterbreaks shall not exceed the following standards:

Estimated Hazard Rating	Road or Trail Gradient (in percent)			
	<10%	11-25%	26-50%	>50%
Extreme	100 ft	75 ft	50 ft	50 ft
High	150 ft	100 ft	75 ft	50 ft
Moderate	200 ft	150 ft	100 ft	75 ft
Low	300 ft	200 ft	150 ft	100 ft

8. A winter operation plan shall be required for any winter harvest or fuel management activity.

MITIGATION

1. Develop a slope map for the PTHP project site or have project maps on current USGS topographic map base.

2. Install waterbars on all exposed soil, heavy equipment trails, and roads no further apart than the Forest Practice Rules Moderate Erosion Hazard rating distance.

3. Restrict timber operations to those areas with low or moderate Erosion Hazard Ratings (EHRs) with slopes less than or equal to 50%. Prohibit timber operations on areas of high or extreme EHR or on slopes over 50%.

4. Require re-stocking in conformance with recommendations of the Registered Professional Forester (RPF) as contained in the PTHP.

5. Require that a minimum of existing organic matter be left on site to reduce energy of rainfall and lower potential erosion. Also, in areas of defensible landscape, lop and/or crush slash and leave it on the ground to further reduce the impact of rain on bare soil.

6. Lop all slash to less than 20 inches above ground, except in areas where higher standards apply (within 100 feet of residences).

7. Prohibit use of heavy equipment within any Watercourse and Lake Protection Zone (WLPZ) except at existing road crossings, thus protecting existing watercourses.

8. Allow only alternatives to WLPZ protection measures that increase the WLPZ width or restrictions within the zone. No decreased restrictions will be allowed.

9. Avoid heavy equipment use on saturated or near-saturated soils.

10. Restrict vegetation removal on landslide-prone areas.

11. Conduct mechanical treatments along contours on areas of moderate to high erosion hazard ratings.

12. New road construction shall be less than 100 feet in length, be on average slopes of less than 20%, involve no substantial cuts and/or fills, and may not occur in any Watercourse and Lake Protection Zone (WLPZ).

13. Allow only in-lieu winter operating plans that do not allow operations in WLPZ or on unstable ground.

Level of Significance Following Mitigation

With implementation of the recommended mitigation measures, impacts to geology and soils will be mitigated to a less than significant level.

Chapter 4. Hydrology and Water Quality

Local climate is typically Mediterranean, with hot, dry summers and wet winters. Seasonal rainfall averages 36 inches with most precipitation occurring October through May. The Plan area is within two watersheds, one draining north to Lake Combie and the Bear River, and the other west to Dry Creek. The Plan area also is dissected by the Bowman and Bear River Canals. Figure 4-1 shows watershed planning areas.

Terrain varies from meadows to gently rolling hills and steep hillsides. Streams are characterized by relatively steep slopes and moderate relief, with narrow, rocky channels. Soils consist of a shallow veneer of loam overlying nearly impervious bedrock, exhibiting moderate to high runoff potential and slow infiltration rates when thoroughly wetted. When exposed to prolonged rainfall, these soils become saturated and contribute to flooding.

Incidence of flooding along the Bear River and its tributaries (Wooley Creek and several unnamed intermittent drainages) are not well documented. The February 1995 storms are the largest on record, estimated to be a 100-year event (based on information from the Dry Creek watershed). Other watercourses not shown on this figure may also pose significant flood hazards. All water courses shown on Figure 4-2 should be considered as possible sources of flooding.

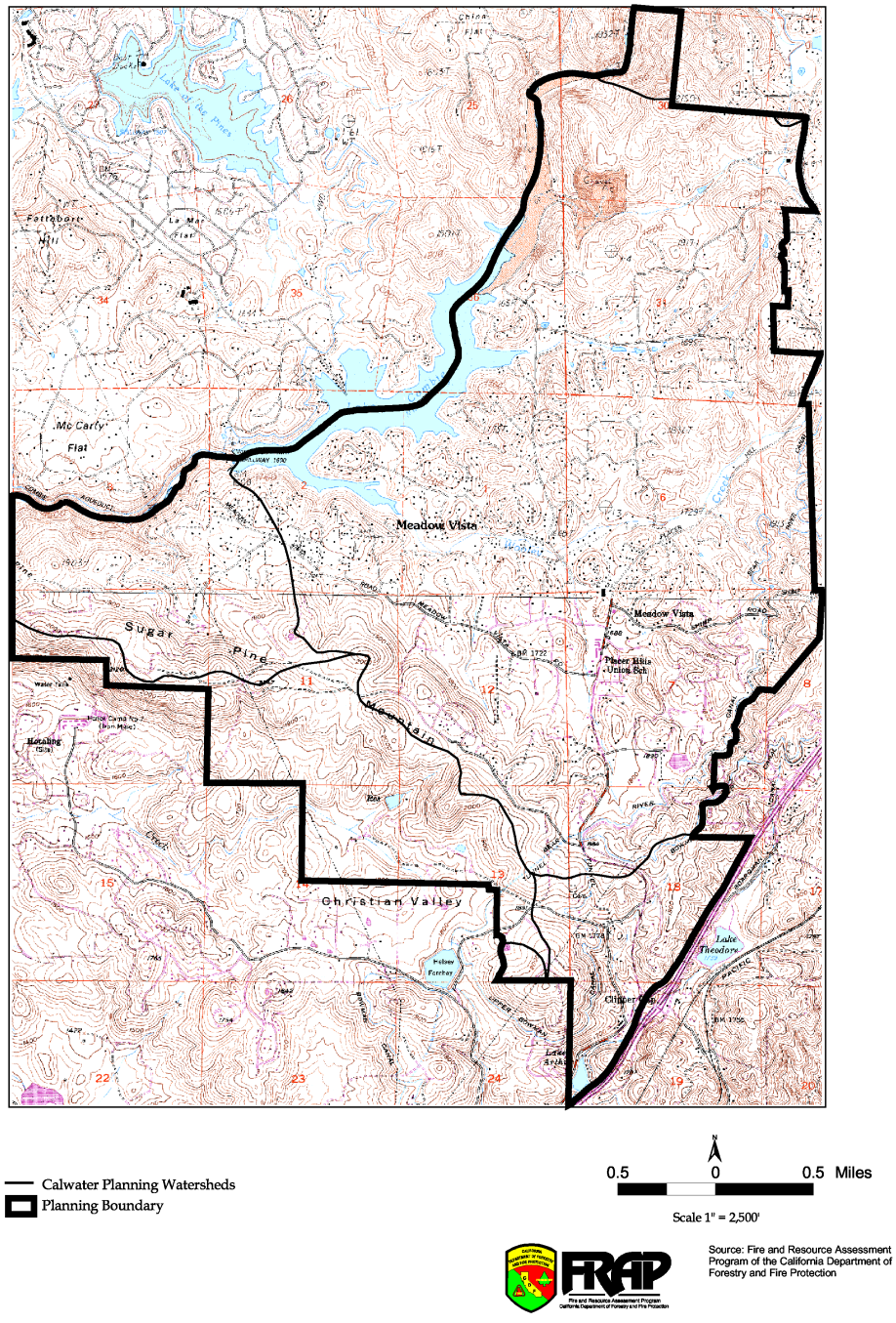
Canals and Reservoirs

A network of open and often unlined canals owned and operated by the Placer County Water Agency (PCWA) and PG&E cross the Plan area. The source of water for the canals is the Yuba/Bear River System. The PCWA and PG&E canals are used for irrigation and influent for municipal treatment. Some residents use this water for domestic supply usually with little or no treatment.

Surface Water Quality

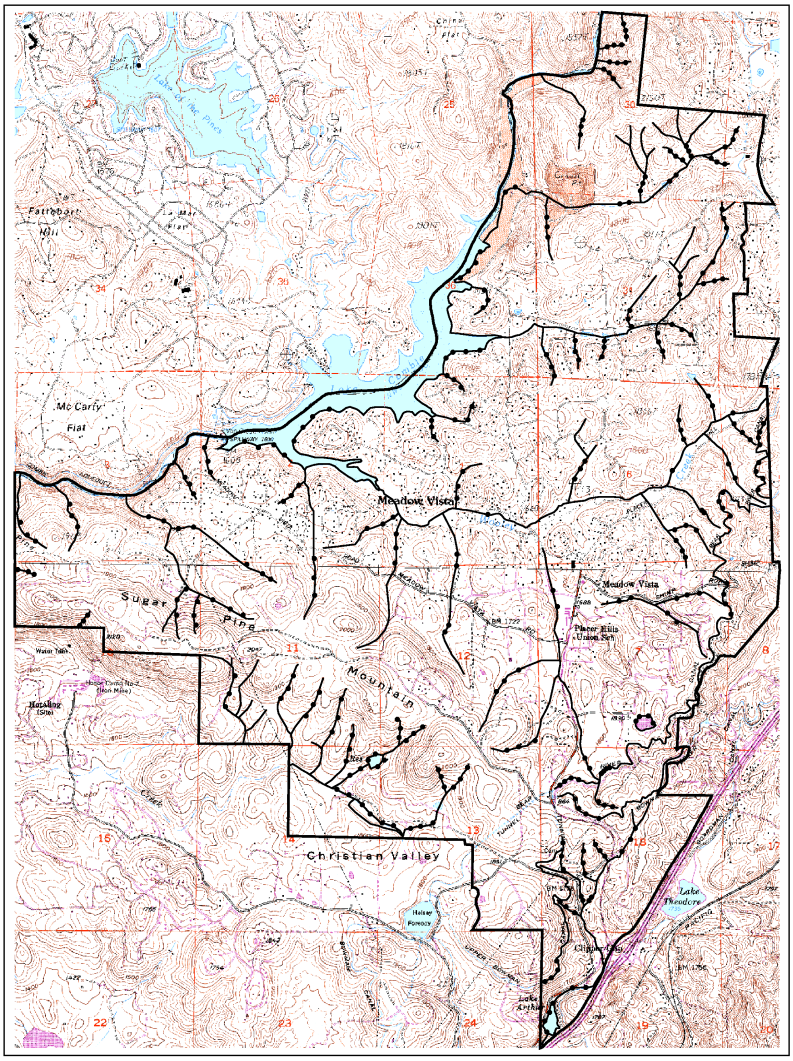
Little data on streamflow and water quality for streams were found in a review of water agency records. Limited water quality data, however, is available from PCWA's canal and water distribution system. Although the source of PCWA's water is outside the Plan area, its canal distribution system runs through the Plan area where a portion of these flows feed local streams. The State Water Resources Control Board

Figure 4-1: Planning Watersheds



Meadow Vista Community
PTEIR

Figure 4-2: Watercourses



(SWRCB) requires that the Foothill Water Treatment Plant operated by PCWA monitor the receiving water both upstream and downstream of the effluent discharge sites.

No data exists for the volume of water the canal distribution systems supplies Plan area streams. Unknown volumes of stream inflow (e.g., urban runoff and spills) combined with water supplies from the canal system have generated perennial streams that were historically intermittent. Visual observations indicate that waterways have become increasingly cloudy, although the exact source of this pollution is unknown. Since no "point-source" discharge occurs in the Plan area (point source is a specific managed source of pollution, such as a wastewater treatment outfall to a stream), this effect reasonably can be assumed to be the result of various "non-point sources" of pollution.

Stormwater Runoff. Stormwater runoff from rural and urban areas may contain excessive levels of pollutants (i.e., nutrients, sediments, pesticides, herbicides, and hydrocarbons) that could be contributing to degradation of local waterways. Water quality degradation from stormwater runoff is primarily the result of runoff carrying pollutants from the land surface (i.e., streets, parking lots, and pastures) to receiving waters (i.e., canals, streams, lakes, and reservoirs). This type of pollution is referred to as "non-point source" pollution because it generally discharges into surface waters in a diffuse manner and at intermittent intervals that are related mostly to the occurrence of meteorological events. Non-point sources generally cannot be monitored at their point or origin, and their exact source is difficult or impossible to trace. The types of pollutants that may be transported to the receiving waters depend on the land use and the associated land use activities in the area.

In the Meadow Vista Community, non-point source pollution is a concern because of potential impacts on open canal drinking water supplies and to aquatic biological resources.

Stream Spills. Streams and canals intersecting or near roads are vulnerable to contamination by accidental spills. Contaminants may include gasoline, pesticides, herbicides, and other ecologically harmful chemicals.

Regulations and Permits

Floodplain Management. PCGP policies and ordinances regarding floodplain management are implemented in review processes at various levels. Identification of

flood hazard areas and appropriate setbacks are required at all levels of project approval. Projects are required to comply with the Land Development Manual, the Stormwater Management Manual, and the Flood Damage Prevention Ordinance. These requirements are implemented at the improvement plan and site inspection stages.

State Water Quality Law, Plans, and Policies

The State Water Resources Control Board (SWRCB) is the primary state agency responsible for formulating policies to protect the state's surface waters and groundwater supplies and approves water quality control plans prepared by each Regional Water Quality Control Board (RWQCB). The federal Environmental Protection Agency (EPA) has granted California primacy in administering and enforcing provisions of the Clean Water Act (CWA) and the National Pollutant Discharge Elimination System (NPDES). NPDES is the primary national program that regulates point source and non-point source discharges to surface waters. EPA oversees the review of waste discharge permits and CWA grant proposal applications. Each RWQCB has developed a basin plan for its region that identifies important regional water resources and beneficial uses, and provides for the prevention and abatement of waste pollution and nuisance. The plans also provide the basis for determining waste discharges, taking enforcement actions, and evaluating CWA grant proposals. Basin plans are reviewed approximately every three years. The Plan area is within the jurisdiction of the Central Valley RWQCB, Region 5.

Floodplain Management Regulations. The Federal Emergency Management Agency (FEMA) is responsible for identifying and mapping floodplains, and development within these floodplains is subject to the requirements set for in the Federal Insurance Act. The 100-year floodplain for portions of Wooley Creek and the Bear River have been mapped by FEMA.

Section 404 Permits. Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States or adjacent or isolated wetlands without a permit from the Corps.

Stream Alteration Permits. The California Department of Fish and Game requires a Section 1601 or 1603 Stream Alteration Permit for any work in the waterway which disturbs or alters habitat.

IMPACTS

Criteria for Determining Significance

According to the State CEQA Guidelines (Appendix G), a project will normally have a significant effect on the environment if it will:

- Substantially degrade water quality;
- Contaminate a public water supply;
- Cause substantial flooding, erosion, or siltation.

Relevant Community Plan Goals and Policies

The Community Plan contains goals, policies, and implementation programs to protect water resources, provide flood protection, and regulate stormwater drainage.

9.B.3. The County shall require development projects proposing to encroach into a creek corridor or creek setback to do one or more of the following, in descending order of desirability:

a. Avoid the disturbance of riparian vegetation;
b. Replace riparian vegetation (on-site, in-kind);
c. Restore another section of creek (in-kind); and/or
d. Pay a mitigation fee for restoration elsewhere(e.g., a wetland mitigation banking program). [6.A.3.]

9.B.4. Where creek protection is required or proposed, the County should require public and private development to:

c. Protect creek corridors and their habitat value by actions such as: 1) providing an adequate creek setback; 2) maintaining creek corridors in an essentially natural state; 3) employing creek restoration techniques where restoration is needed to achieve a natural creek corridor; 4) utilizing riparian vegetation within creek corridors and, where possible, within creek setback areas; 5) prohibiting the planting of invasive, non-native plans (such as vinca major and eucalyptus) within creek corridors or creek setbacks; and 6) avoiding tree removal within creek corridors.

9.B.5. The County shall continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for agricultural activities. [6.A.5.]

9.B.10. The County shall encourage the preservation and protection of open space located in watersheds which serve reservoirs due to its importance in the adequate performance of those reservoirs for their intended purposes.

The watershed is defined as those lands draining into a reservoir and having an immediate effect upon the quality of water within that reservoir. Those lands located within the watershed and with 5,000 feet of the reservoir shall be considered as having an immediate effect. For Meadow Vista, this includes Lake Combie watershed and the Lake Arthur/Lake Theodore watershed. [6.A.11., 12/30]

5.F.8. The County shall preserve or enhance the aesthetic qualities of natural drainage courses in their natural or improved state compatible with flood control requirements and economic, environmental, and ecological factors. [4.F.10.]

Impact Analysis

Surface Water

Hydrology. Changes in interception and infiltration rates with vegetation removal and the construction of tractor roads associated with the proposed project could contribute to existing flooding problems in Wooley Creek and along the Bear River. Stormwater runoff generated from new roadways and changes in landscape would increase the volume and rate of water entering local waterways. Clearcutting, in particular, can in some cases cause large increases in peak flows. The impact is considered significant because of the potential for exacerbating existing flooding problems, which may result in localized flooding and the potential for property damage.

Canals and Reservoirs. Several canals and reservoirs in the Plan area may be subjected to water quality degradation through the interception of stormwater runoff

increased by vegetation removal. As development of lands adjacent to these open canals and reservoirs occurs, the likelihood for increase pollutant levels increases. Use of heavy equipment, slash, and yarding could result in a possible decrease in water quality in the canals and reservoirs in the Plan area. This impact is considered significant because the canals and reservoirs are used for irrigation and domestic supply.

Surface Water Quality. Some streams and canals are used as a domestic water supply source without any form of pretreatment. Protection of surface waters, therefore, is important from both a quantity and quality perspective. Vegetation management activities could cause short-term impacts on water quality because of potential increased sediment loading and turbidity.

Disturbances that remove natural cover or change site topography with construction of access roads could result in increased sediment and nutrient loading from individual project sites. The degree to which these activities affect water quality is determined largely by the nature, extent, and timing of project activity and rainfall. Consequently, sediment levels resulting from vegetation management activities would be less in summer than during winter. Vegetation management activities could result in possible short-term and long-term water quality degradation of streams. In addition to sedimentation impacts, use of heavy equipment presents the potential for accidental spills of pollutants such as gasoline, oil, and diesel fuel. While current Forest Practice Rules cover the servicing and disposal of certain products, there is nothing specific in the rules that deals with accidental release of oil or other chemicals except that they must be cleaned up.

It is the intent of the Board of Forestry, however, to restore, enhance, and maintain the productivity of timberlands while providing equal consideration for the beneficial uses of water. Further, it is the intent of the Board to clarify and assign responsibility, to recognize potential impacts of timber operations on the beneficial uses of water, and to adopt feasible measures to prevent water pollution related to timber harvesting. (936)

These impacts are considered significant because of the high quality of water in area streams and the numerous beneficial uses associated with water resources.

California Forest Practice Rules Requirements

All applicable Forest Practice Rules will apply to any PTHP undertaken pursuant

to this PTEIR. The following Rules are particularly relevant for hydrology and water quality. As part of the project description, these requirements will reduce many potential impacts to a less than significant level.

1. The Registered Professional Forester (RPF) shall conduct a field examination of all lakes and watercourses and shall map all lakes and watercourses which contain Class I, II, III or IV waters. As part of this field examination, the RPF shall evaluate areas near watercourses and lakes for sensitive conditions including, but not limited to, use of existing roads within the standard Watercourse and Lake Protection Zone (WLPZ) width, unstable and erodible watercourse banks, debris jam potential, flow capacity and changeable channels, overflow channels, and flood prone areas. The RPF shall consider these conditions when proposing WLPZ widths and protection measures. The PTHP shall identify such conditions where they may interact with proposed timber operations to significantly and adversely affect the beneficial uses of water, and shall describe measures to protect the beneficial uses of water. (936.4(a))

2. When the protective measures contained in 14 CCR 936.5 are not adequate to provide protection to beneficial uses, feasible protective measures shall be developed by the RPF or proposed by the Director under the provisions of 14 CCR 936, Alternative Watercourse and Lake Protection, and incorporated in the THP when approved by the Director. (936.2)

3. The quality and beneficial uses of water shall not be unreasonably degraded by timber operations. The timber operator shall not place, discharge, or dispose of in such a manner as to permit to pass into the water of this state, any materials, including, but not limited to, soil, silt, bark, slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, or the quality and beneficial uses of water. All provisions of this article shall be applied in a manner which complies with this standard. (936.3)

4. The accidental depositions of soil or other debris in lakes or below the watercourse or lake transition line in waters classed I, II and IV shall be removed immediately after the deposition or as approved by the Director. (936.3(b))

5. Require removal of logging debris from Class III waterways by October 15 of the current year. (936.4 (c)(3))

6. The following standards shall be adhered to in servicing logging equipment and

disposing of refuse, litter, trash and debris:

a. Equipment used in timber operations shall not be serviced in locations where servicing will allow grease, oil, or fuel to pass into lakes or watercourses.

b. Non-biodegradable refuse, trash, and debris resulting from timber operations, and other activity in connection with the operations shall be disposed of concurrently with the conduct of timber operations. (934.5)

7. The RPF shall notify all landowners within 1,000 feet downstream from the proposed operating area on certain defined watercourses to request information on surface water withdrawal for domestic water use from those watercourses. The RPF shall publish a Public Notice in a local newspaper, requesting the same information. If domestic use withdrawals occur in the area, then the PTHP must include measures to protect that water use. (1092.7)

8. When proposed timber operations may threaten to degrade a domestic water supply, the Director shall evaluate any mitigation measures recommended prior to the close of the public comment period (PRC 4582.7) and shall require the adoption of those practices which are feasible and necessary to protect the quality and beneficial use of the supply. (936.10(a))

9. When necessary to protect the beneficial use of water, the RPF shall designate and the Director may require a WLPZ or equipment limitation zone for Class III and Class IV waters. Required protection measures may include surface cover retention, vegetation protection, equipment limitations, and timber falling limitations. (936.4(c)(1))

MITIGATION

(See also Mitigation in Chapter 3, Geology and Soils)

1. Establish watercourse and lake protection buffer zones along perennial watercourses in which vegetation removal, fuel reduction, and ground disturbance are limited. The width of the buffer zone is dependent on the adjacent hillside slope and watercourse class as shown below:

	Watercourse Class		
Hillside Slope	Fish Bearing I	Non-Fish Bearing II	Intermittent III
0-30%	75 feet	50 feet	25 feet
30-50%	100 feet	75 feet	50 feet
50% >	150 feet	100 feet	50 feet

2. Prohibit heavy equipment from streamside buffer zones except at designated crossings.

3. Restrict new road construction to less than 100 feet in length with no construction within any watercourse buffer zone.

4. Prohibit clearcut harvesting.

Level of Significance Following Recommended Mitigation

With implementation of recommended mitigation measures, potential impacts to hydrology and water quality will be reduced to a less than significant level.

Chapter 5. Visual Resources

Scenic quality can best be described as the overall impression that an individual retains after driving through, walking through, or flying over an area. Viewer response is a combination of viewer exposure and viewer sensitivity. Judgments of visual quality must be based on a regional frame of reference (U.S. Soil Conservation Service 1978.) The same landform or visual resource appearing in different geographic areas could have a different visual resource quality and sensitivity in each setting. For example, a small hill may be a significant visual element on a flat landscape but have very little significance in mountainous terrain.

Plan Area Visual Resources

The Plan area is in the rolling foothills of the Sierra Nevada. Low profile, ranch style homes, partially concealed by dense vegetation, are common throughout this landscape. Narrow, winding roads without concrete gutters and sidewalks and framed instead by native vegetation, weave through these foothills. The rural residential character is accentuated by small vegetable gardens and occasional pastures that dot the landscape.

Valleys in the Plan area are well enclosed by surrounding hillsides, limiting most view to the foreground and middle ground distance zones. Occasional residences built on higher hilltops have expansive views of the surrounding foothills. Representative visual features include the rural residential community, downtown village commercial center and limited commercial development along Placer Hills Road, major residential roads, and open space.

Throughout the residential community, the mosaic pattern of foothill vegetation and the gently rolling terrain, which are the cornerstone of the Plan area's visual resources, remain largely unaltered. Because of this and the landscape-compatible scale and lines of the residences, views of the rural residential community are moderately vivid and intact.

Major Roads

Views observed from major roads can shape an individual's impression of an area. Views from major residential roads are described below:

Placer Hills Road. Placer Hills Road is a two-lane north/south oriented roadway that serves the heart of the Plan area. The roadway extends from I-80 at the southern extreme of the Plan area, through the downtown area of Meadow Vista, and on north, eventually connecting to the City of Colfax.

Heading north from the Clipper Gap/Meadow Vista interchange, the approximate two-mile approach to the central commercial district is bordered by Ponderosa pine and oak forests. Wooden signs at the entrance to driveways screened with vegetation are the only evidence of residences. From north of Sugar Pine Road to Meadow Vista Road, Placer Hills Road gently declines into the Plan area and crosses over the open Bowman Canal. South of the commercial center, Placer Hills School, Sierra Hills School, and their associated parks, playgrounds, and landscaping provide open, park like views from the roadway.

From Meadow Gate Road heading north to Crother Road, the shoulders narrow, and open views of dry meadows and irrigated pastures are framed by gently rolling hills and forests. Walgra Meadows is a focal point of this area. Open and partially screened views of residences near Crother Road are visible from Placer Hills Road.

Meadow Vista Road. Meadow Vista Road extends west from Placer Hills Road. It begins just north of Meadow Vista Park and ends near the Bear River below Van Giesen Dam. The small valley that it bisects is more open in character than much of the Plan area. Most of the rural residences along Meadow Vista Road are set back in the trees and have large front lawns that extend to the roadside. Heritage oaks are more prevalent than sugar pines in this valley and on its hillsides. Views of the Plan area from Meadow Vista Road are moderately vivid and of good quality.

Combie Road. Combie Road begins at the northern end of the downtown commercial district along Placer Hills Road and extends to the northwestern corner of the Plan area. The road is generally flanked by dense vegetation, and many of the residences are largely concealed by mature sugar pines and shrubs. Combie Road provides a few of the limited public views of Lake Combie. Views of the lake are usually screened by vegetation even when the road is just few hundred feet from the lake. Views of the Plan area from Combie Road are of moderate quality and are generally common to the area.

Volley Road. Volley Road Y's off of Combie Road and continues west to Lake Combie. The rural estate homes in this area are generally hidden amongst the pines, which dominate the landscape and provide a protective intimate atmosphere to the area. The west end of Volley Road provides most of the views of Lake Combie available to the public. The views are partially screened by the dense sugar pine forest. Overall, the views of the Plan area from Volley Road are moderately vivid and of good quality.

Meadow Gate Road. Meadow Gate Road is one of the few thoroughfares in the Plan area and extends east from Placer Hills Road to the eastern boundary of the Plan area and on to the I-80 corridor. Although the road is generally flanked by dense vegetation, openings in the canopy are provided by residential lawns and a few small pastures. Views from Meadow Gate Road are of moderate quality and are common to the area.

Although no roadway is designated as a "scenic corridor," most roads are scenic and contribute to the rural atmosphere. Dense vegetation along many roads screens existing development and contributes to the perception of undeveloped, natural views.

Riparian Areas, Natural Land Forms, and Native Vegetation

A flat meadowland (Walgra Meadows) is in the center of the Plan area, surrounded by ridges of low to moderate height characterized by dark, dense mature trees and shrubs with openings of annual grassland. Wooley Creek bisects the meadow. The contrasts in form, color, and texture of this vegetation add visual variety and interest to the foothill viewscape.

Lake Combie is a unique landscape feature. High-quality views of this small reservoir are possible to residences on adjacent ridges. Views of the reservoir, framed by forested ridges in the middle ground and background and sparse to dense riparian vegetation in the foreground, are vivid. The concealed nature of nearby foothill residences contributes to the intactness of this view.

Lake Arthur, a small reservoir east of Lake Arthur Road at the southern tip of the Plan area, is a distinctive water feature. No vegetation softens the transition from road to water, but the view of the reservoir from the road is framed by intermittent tall trees in the middle ground and vegetated hills in the background.

Views of freeway traffic on I-80 along the southeastern border of the reservoir detracts from the intactness of the view. Views of the reservoir are moderately vivid.

IMPACTS

Criteria for Determining Significance

The State CEQA Guidelines (Appendix G) state that a project normally has a significant impact on the environment if it will:

- Have a substantial, demonstrable negative aesthetic effect.

Interpretation of this definition for the proposed project considers that creation of defensible space, shaded fuel breaks, and a healthy forest will result in a significant visual impact if it will:

- Substantially change high-quality or distinctive views of watersheds,
- Substantially change the quality of scenic corridors or views from scenic roadways,
- A moderately intensive degradation in landscape quality would be seen by a large number of relatively sensitive viewers, or
- A highly intensive degradation in landscape quality would be seen by any relatively sensitive viewers.

Relevant Community Plan Goals and Policies

The Community Plan includes various key goals, policies, and implementation programs relating to scenic resources, scenic routes, and community design.

Policies

1.K.1. The County shall require that new development in scenic areas (e.g., river canyons, lake watersheds, scenic highway corridors, ridgelines, and steep slopes [especially Sugar Pine Mountain]) is planned and designed in a manner which employs design, construction, and maintenance techniques that:

b. Incorporate design and screening measures which utilize natural landforms and vegetation for screening structures, access roads, building foundations, and cut-and-fill slopes consistent with the needs of the State Fire Safe and Fire District Defensible Space programs.

1.K.8. The County shall balance the desire to maintain heavily vegetated corridors along circulation routes to preserve their rural nature and perceived values as natural noise buffers with the need to reduce fuel loads (both the volume and density of flammable vegetation) along fire escape routes to increase safety for emergency fire equipment and evacuating civilians, to provide a point of attack or defense from a wildfire, and as fuel or fire breaks. [1/24]

Impact Analysis

Implementation of the Meadow Vista Vegetation Management Project would result in a change in the visual character of the area through a reduction in visual quality. The intent of the PTEIR is to maintain the existing forested condition of the Meadow Vista area while managing the vegetation for defensible space, shaded fuelbreaks, and defensible landscapes. Each one of these objectives means reducing the total amount of vegetation, and spacing out the remaining vegetation. Overall, the visual impact will be to keep the same basic forest types, only with a more open type appearance. Impacts will be reduced by restricting the silvicultural harvest systems that can be used under the PTEIR/PTHP system (see *Introduction and Project Description*). Allowing restricted systems and their associated post-harvest stocking standards required by current regulations will mean that existing sizes of trees will be maintained, but in a more open setting. This could open vistas to adjacent properties, impacting feelings of privacy and rural quality to some people.

Vegetation management operations would consist almost entirely of selective harvesting, which would not substantially alter the visual composition of forest stands. Although the reduced density of trees and groundcover resulting from selective harvesting would go unnoticed by many viewers, those who notice such changes are likely to perceive them as having an effect on visual quality. Full implementation of the Meadow Vista Vegetation Management Project by all landowners (an unlikely outcome) would significantly alter the visual regime. In many

respects, this represents a balancing of alternatives wherein visual quality is reduced in order to provide greater safety from wildland fire and to reduce wildland fire's ecosystem and aesthetic impacts.

Short-term visual effects of vegetation management would include the presence of fresh-cut stumps and slash accumulations in some cases. In the context of commercial forests such effects are common (though typically at a more intensive level) and consistent with most viewers expectations. In an urban/rural setting such as Meadow Vista, however, such effects will be noticeable to many residents.

Projects undertaken pursuant to PTEIR requirements will be allowed to burn only under restricted conditions. As a result, visual impacts from smoke will be reduced in comparison to fuel reduction completed without such controls.

In most cases, tree removal as part of a fuels reduction program will not remove dominant trees that top the skyline. More often, co-dominant trees, where all trees are roughly the same height will be thinned out for more open spacing. An exception would be when large dominant trees have disease, insect or structural problems and need to be removed for health or safety reasons. The defensible landscape treatment allows shelterwood and seed tree removal, which could allow for the harvest of some dominant trees; however, there is a specified leave tree standard for larger trees (i.e., trees 18 inches DBH or larger).

Major Residential Roads

It is alongside roadways where shaded fuelbreaks will be most effective as they take advantage of the open roadway as part of the vegetation modification area. On either side of the road, vegetation will be thinned with more open spacing. Such vegetation management would result in a minor reduction in the visual quality of views of the Plan area from major residential roads.

Streams, Riparian Areas, Natural Land Forms, and Native Vegetation

Vegetative management would result in alteration of vegetation near riparian areas and native vegetation. This impact is not considered significant because Forest Practice Rules and PTEIR mitigation measures protect such areas from intrusion.

MITIGATION

1. Restrict allowable silvicultural harvest methods to only those that maintain at least a minimum amount of mature overstory trees.

2. Leave a variety of size class vegetation in shaded fuelbreak areas, while still providing an adequate disruption of fuel continuity for fuelbreak function.

3. Complete clean-up of slash and organic debris in defensible space and shaded fuelbreak areas. Clean-up shall be by chipping, removing, or burning. Chipping shall occur no later than 45 days after the creation of the slash and debris. Piling for burning shall occur no later than 60 days after the creation of the slash or debris, with burning no later than April 1 of the year following creation or one year from the date of creation, whichever comes first. Removal shall occur no latter than 60 days of the creation of the slash or debris. For clean-up purposes, shaded fuelbreaks shall be 100 feet either side of centerline of designated roads.

Level of Significance

Potential impacts to visual resources will be reduced by limited silvicultural practices proposed for fuel reduction purposes. Vegetative screening can be accomplished by selective removal of brush and understory to ensure privacy. Selective removal and replanting of native or other species to maintain a desired level of screening will reduce impacts to a less than significant level.

Chapter 6. Biological Resources

Information presented in this chapter is based on reconnaissance field surveys, existing environmental studies including the Meadow Vista Community Plan EIR, vegetation maps, published databases, and contacts with the State Department of Fish and Game.

The Plan area is characterized by plant communities and wildlife typical of the foothill region, and is either rural or undeveloped and predominantly ponderosa pine forest and foothill woodland. Plant communities are depicted in Figure 6-1. The following plant communities and wildlife habitats characterize the Plan area:

valley oak woodland
wetlands/riparian
ponderosa pine forest
foothill woodland
chaparral
annual grassland
urban
irrigated pasture
blue oak/gray pine
blue oak woodland
landfill
orchard/vineyard
gravel mine

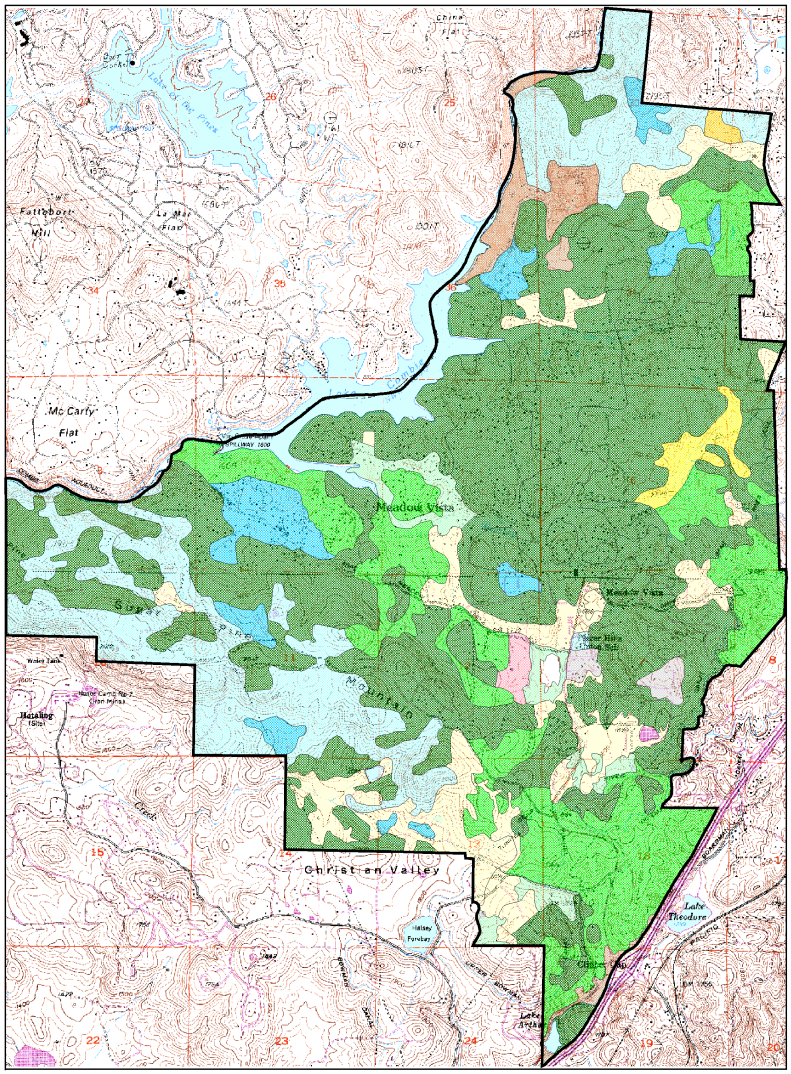
Vegetation and wildlife resources are grouped into common natural communities and wildlife habitats; artificial plant communities and wildlife habitats; and sensitive natural communities and wildlife habitats.

Common Natural Communities and Wildlife Habitats

Common natural communities are native or naturalized habitats not altered by farming or other land disturbance. These communities are common throughout northern California and not considered sensitive. Under the Placer County Tree Ordinance, all native trees are considered important resources and a tree permit and mitigation may be required for removal of native trees from these communities when building permits are required. From a biological and CEQA standpoint, however,

Meadow Vista Community
PTEIR

Figure 6-1: Plant Communities



native trees that comprise these communities are common in the Plan area and are discussed in this section rather than under sensitive natural communities.

Ponderosa Pine Forest. Ponderosa pine forest is the dominant plant community and contains ponderosa pine, gray pine, blue oak, and interior live oak. Incense cedar and blue oak occur occasionally in the forest canopy. The understory layer depends on canopy density and contains either shrub or herbaceous species. Many wildlife species are found in Ponderosa pine forests. Pine cone seeds provide food for the scrub jay, white-breasted nuthatch, and western gray squirrel. Primary cavity-nesting birds (birds that excavate their own nest cavities), such as the Nuttall's woodpecker and northern flicker, excavate holes in the soft wood of ponderosa pines and oaks for nesting. Secondary cavity-nesting species, such as the western bluebird, use abandoned cavities.

Foothill Woodland. Foothill woodland (shown as blue oak woodland and blue oak/gray pine in Figure 6-1) typically occurs on south-facing slopes near Ponderosa pine forest and brush communities. This woodland is dominated by black oak and interior live oak. The understory layer consists of scattered shrubs and grassland species. Wildlife habitat is similar to that of Ponderosa pine forest and brush habitats.

Chaparral. Chaparral communities are characterized by evergreen, hard-leaved shrubs adapted to dry, infertile soils. Typical dominants found in the mixed chaparral community include manzanita, buck brush, poison-oak, and coffee berry. Scattered gray pine, ponderosa pine, and black oak also occur. Species that inhabit brush include California quail, California thrasher, western fence lizard, mule deer, and coyote.

Grassland. Grassland is a herbaceous community characterized by annual and perennial grasses and forbs. Annual grasslands are dominated by annual grasses such as wild oats, ripgut brome, fescue, and a variety of herbs. Native perennial grasslands occur on open, north-facing slopes and under Ponderosa pine forest and oak communities. Grasslands provide nesting and foraging habitat for several wildlife species, including the gopher snake, red-tailed hawk, western meadowlark, California ground squirrel, and California vole.

Artificial Plant Communities and Wildlife Habitats

Artificial plant communities are human landscapes that provide some wildlife habitat value. Rural landscape and irrigated pasture are the primary artificial communities located in the Plan area.

Sensitive Natural Communities and Wildlife Habitats

Sensitive natural communities are regionally diverse, uncommon, or have been identified as a sensitive resource by local, state, or federal agencies. Elimination or degradation of a sensitive community would constitute a significant impact on plants and wildlife, as defined under CEQA. In the Plan area, riparian and stream habitat, valley oak woodland, and wetlands are considered sensitive natural communities.

Riparian and Stream Habitat. Riparian communities occur along perennial and seasonal streams, ponds, low-lying swales, and the shores of Lake Combie and Lake Arthur. Approximately 102 acres of the 6,979-acre Plan area supports riparian and stream habitats. The highest quality riparian habitat occurs along Wooley Creek and a tributary of Wooley Creek that runs parallel to Placer Hills Road.

Mixed riparian forest is the dominant riparian community and is characterized by intermixing layers of tree, shrub, and herbaceous plants. The forest canopy layer typically consists of Fremont's cottonwood, alder, willow, and valley oak. Under this tree layer, willow, blackberry, and poison-oak form a sparse to dense shrub layer along streams and ponds.

Portions of riparian and stream habitats may qualify as wetlands (defined below under "Wetlands") and therefore would be regulated by the U.S. Army Corps of Engineers under Section 404 of the Federal Clean Water Act (CWA). All stream habitats also are regulated under the California Fish and Game Code, Sections 1601-1603, which address streambed alteration agreements.

Valley Oak Woodland. Valley oak woodland occurs as narrow bands along drainages and as clusters in drainage floodplains. Examples of this sensitive community occur just north of Lake Arthur and at the southwest corner of the Volley Road/Combie Road intersection. Valley oak woodland is dominated by large valley oaks and sometimes contains interspersed interior live oak. The understory is dominated by annual grassland species or perennial pasture. Valley oak woodland is

considered a sensitive natural community by Placer County because it is locally and regionally uncommon. Valley oak woodland provides important habitat for wildlife because it occurs at lower elevations with mild temperatures. The habitat also produces acorns used by approximately 15% of all wildlife species in California, including the wild turkey, California quail, scrub jay, acorn woodpecker, and mule deer.

Wetlands. Wetlands include a variety of communities characterized by water-loving plants, hydric soils, and wetland hydrology. Wetlands that support these three characteristics qualify as "waters of the United States" and are regulated under Section 404 of the CWA. Wetland communities are typically associated with ponds, streams, and canals. Some wetland communities also occur in irrigated pasture. Wetland communities include marshes, wet meadows, and seasonal wetlands. These plant communities generally include various combinations of cattail, rush, pond weed, common streamside monkeyflower, fescue, and deer grass. Many wildlife species depend on wetland habitats for foraging, nesting, and cover.

Special-Status Plant and Wildlife Species

Special-status species are legally protected under state and federal Endangered Species Acts (ESAs) or other regulations, and species considered sufficiently rare to qualify for such listing (see Tables 6-1 and 6-2 for species lists).

Special-status plants include species in the following categories:

- plants listed or proposed for listing as threatened or endangered under the federal ESA (50 Code of Federal Regulations [CFR] 17.12 for listed plants and various notices in the Federal Register [FR] for proposed species);

- plants that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the federal ESA (55 CFR 6184, February 21, 1990);

- plants that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines, Section 15380);

- plants listed or proposed for listing by the State of California as threatened or endangered under the California ESA (14 California Code of Regulations [CCR] 670.5); and

- plants listed under the California Native Plant Protection Act (Cal. Fish and Game Code, Sections 1900 et seq.).

Special-status animals are defined to include species in the following categories:

- animals listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species);

- animals that are Category 1 or 2 candidates for possible future listing as threatened or endangered under the federal ESA (54 CFR 554, January 6, 1989);

- animals that meet the definitions of rare or endangered species under CEQA (State CEQA Guidelines, Section 15380);

- animals listed or proposed for listing by the State of California as threatened and endangered under the California ESA (14 CCR 670.5);

- animal species of special concern to DFG (Remsen 1978 for birds, Williams 1986 for mammals); and

- designated sensitive species of the Board of Forestry

- animal species fully protected in California (Cal. Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Special-Status Plants. Based on a review of existing environmental documents and DFG's Natural Diversity Data Base (NDDB), one special-status plant population (Sanborn's onion) has been reported in the Plan area. Sanborn's onion was located on the Winchester project site during a 1982 survey. This species is considered rare but not endangered by the California Native Plant Society (CNPS, List 4). No other special-status plants have been reported. However, because DFG is continually

adding new locations into the NDDB and because the Plan area has not been fully surveyed, other special-status plant populations probably occur.

According to CNPS's Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994), 22 special-status plants have the potential to occur in the Plan area (Table 6-1).

Special-Status Wildlife. According to DFG's NDDB, no special-status wildlife species have been reported in the Plan area. However, special-status wildlife species surveys have not been conducted, and such species could be present. Surveys will be conducted as projects are planned and PTHPs prepared under this PTEIR.

Potential habitat exists for 20 special status species (Table 6-2). Suitable elderberry habitat for VELB was identified in the Winchester project area.

The California Department of Fish and Game and the US Fish and Wildlife Service identified special status species potentially occurring with in the project area of potentially affected by project implementation (Appendix C). Not all of these species are included in Table 6-2 due to: (1) lack of suitable habitat for those species within the project area, (2) known distribution of species does not include the project area, and/or (3) habitat is not potentially impacted by project implementation or impacts are not measurable.

Wildlife Species of Special Interest. Special interest species are those such as game animals with high value to the public but which are not threatened or endangered. Mule deer, California quail, and wild turkey are species of special interest known to occur in the Plan area. Bobcats and mountain lions are also present.

Fisheries Resources

Streams and reservoirs in the Plan area are identified as low-quality habitats for fish by the Meadow Vista Community Plan. Wooley Creek is a perennial stream that could support green sunfish or Sacramento sucker. The Plan area includes a portion of Lake Combie on the Bear River which could support trout, bass, Sacramento sucker, and green sunfish. Lake Arthur is a popular fishing spot, but no surveys have been conducted to determine which fish are present. Salmon and steelhead are not present within the community plan area in part due to lack of habitat and barriers to fish migration on the Bear River (Camp Far West and Combie reservoirs).

Table 6-1: Special Status Plant Species with Known or Potential Occurrence in the Meadow Vista Community Plan Area

Plant Species	Listing Status Fed/State/CNPS	Habitat Requirements	Distribution	Potential to Occur
Allium sanbornii var. *congdonii* Congdon's onion	--/--/4	Serpentine or volcanic outcrops, chaparral, woodland	Foothill counties	High
Allium sanbornii var. *sanbornii* Sanborn's onion	--/--/4	Serpentine outcrops, chaparral, woodland, low coniferous forest	Foothill counties	High; located in 1986 in Plan area
Azolla mexicana Mexican mosquito fern	--/--/4	Ponds, slow streams, wet ditches	Nevada County	Moderate
Balsamorhiza macrolepis var. *macrolipis* Big Scale balsam root	--/--/1b	Woodlands, foothill grassland, sometimes serpentine	Foothill counties	Moderate
Calystigia stebbinsii Stebbins morning glory	E/E/1b	Serpentine or gabbro chaparral opening, woodland	Placer and El Dorado Counties)	Low
Caradmine pachystigma var. *dissectifolia* Dissected leaf toothwart	--/--/3	Chaparral, serpentine outcrops	Butte, Mendocino, Placer, Sonoma Counties	Low
Chlorogalum grandiflorum Red Hills soaproot	C2/--/1b	Chaparral, woodland, serpentine, or gabbro	El Dorado, Placer, Tuolumne Counties	Low
Fremontodendron decumbens Pine Hill flannel bush	E/R/1b	Gabbro or serpentine chaparral, woodland	El Dorado and Nevada Counties	Moderate
Galium californicum ssp. *sierrae* El Dorado County galium	E/R/1b	Gabbroic substrate, chaparral, woodland, lower montane forest	El Dorado County	Low

Table 6-1: Special Status Plants, Continued

Plant Species	Listing Status Fed/State/CNPS	Habitat Requirements	Distribution	Potential to Occur
Glyceria grandis American Manna grass	--/--/2	Bogs, meadows, marshes, streambeds, and lake margins	Humbolt, Placer, Mariposa, Counties	Moderate
Lathyrus sulphureus var. *argillaceus* Dubious pea	--/--/3	Woodlands, lower and upper coniferous forest	Nevada, Placer, Shasta Counties	Low
Mondardella candicans Sierra monardella	--/--/4	Chaparral, woodland, low coniferous forest, sandy soils	Foothill counties	Low
Navarretia prolifera ssp. *lutea* Yellow bur navarretia	--/--/4	Chaparral, woodland, dry rocky flats near drainage channels	El Dorado and Placer Counties	Moderate
Perideridia bacigalupii Baciagalupi's yampah	--/--/4	Chaparral, lower coniferous forest, serpentine	Foothill counties	Low
Perideridia pringlei Adobe yampah	--/--/4	Grassy slopes, serpentine outcrops, chaparral, woodland	Foothill counties	Low
Plagiobothrys glypto carpus var. *modestus* Cedar Crest popcorn flower	C2/--/3	Woodlands	Near Grass Valley	Moderate
Phacelia stebbinsii Stebbin's phacelia	C2/--/1b	Woodland, lower coniferous forest, meadows	El Dorado and Placer Counties	Low
Rynchospora alba White beaked-rush	--/--/4	Bogs, marshes	Foothill counties	Low
Scutellaria galericulata Marsh skullcap	T/--/2	Wet sites, meadows, streambanks, coniferous forest	Foothill counties	Moderate

Table 6-1: Special Status Plants, Continued

Plant Species	Listing Status Fed/State/CNPS	Habitat Requirements	Distribution	Potential to Occur
Senecio layneae Layne's ragwort	C2/R/1b	Serpentine or gabbro chaparral, woodland	El Dorado and Tuolumne Counties	Low
Sidalcca stipularis Scadden Flat checkerbloom	C1/E/1b	Freshwater seep, wet meadow	Scadden Flat (Grass Valley	Low

Status Explanation: potential to occur based on presence of potential habitat

Federal (U.S. Fish and Wildlife Service):

- E Listed as endangered under the Federal Endangered Species Act.
- T Listed as threatened under the Federal Endangered Species Act.
- C1 Category 1 candidate for federal listing; includes species with enough information to list.
- C2 Category 2 candidate for federal listing; includes species for more information is needed.

State (California Department of Fish and Game):

- E Listed as endangered under the California Endangered Species Act.
- R Listed as rare under the California Endangered Species Act. Not longer used for new listings.

California Native Plant Society (CNPS)

- 1b rare, threatened, or endangered in California and elsewhere
- 2 rare, threatened, or endangered in California but more common elsewhere
- 3 plants about which more information is needed
- 4 plants of limited distribution

Table 6-2: Special Status Wildlife Species with Known or Potential Occurrence in the Meadow Vista Community Plan Area

Species	Listing Status Federal/State	Distribution	Preferred Habitats	Occurrence in the Plan Area	Reasons for Concern
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	T/--	Streamside habitats below 2,000 feet throughout the Central Valley	Riparian and oak savanna habitats with elderberry bushes	Potential habitat exists along riparian corridors and oak savannas. Elderberries exist in the Winchester area	Loss and fragmentation of riparian habitats
Rana boylii Foothill yellow-legged frog	CS/SSC	Sierra Nevada foothills and Coast Range	Shallow streams with riffles	No records; potential habitat exists in the Plan area but is limited	Alteration of stream habitats by urbanization
Rana aurora draytoni California Red-legged Frog	T	Occurs from Shasta county south to the Mexican border. Significant number occur only in small coastal drainages between point Reyes and Santa Barbara county	Optimal habitat is dense shrubby riparian vegetation associated with deep, still or slow moving water	No records; historically present in Placer county. Likely extirpated although habitat is present	Habitat alteration, livestock grazing, and introduction of exotic aquatic predators.
Clemmys marmorata marmorata Northwestern pond turtle	C2/SSC	Foothills and lowlands throughout California	Ponds, marshes, and streams for foraging and cover; adjacent grasslands for nesting	No records; suitable habitat exists along streams and ponds throughout the Plan area	Loss or alteration of aquatic and wetland habitat or adjacent nesting habitat
Phrynosoma coronatum frontale California horned lizard	--/SSC	Foothills, Sacramento Valley south to Southern California	Grasslands, brush, woodlands with loose sand or gravel	No records; potential habitat exists throughout the Plan area	Habitat alteration and degradation

Table 6-2: Special Status Wildlife Species, continued

Species	Listing Status Federal/State	Distribution	Preferred Habitats	Occurrence in the Plan Area	Reasons for Concern
Myotis leibii Small-footed Myotis	SC	Common bat of arid uplands in a variety of habitats below 8900 ft. elevation	Found in relatively arid and open wooded and brushy uplands near water. Finds cover in caves, crevices, under bark and in buildings	No records; habitat likely exists in the plan area	Vulnerable to disturbance at maternity and hibernation sites.
Myotis evotis Long-eared Myotis	SC	Widespread in California but uncommon. Occurs below 9000 ft elevation	Found in nearly all brush, woodland, and forest habitats. Finds cover in snags, under bark, caves, and buildings	No records; Habitat likely exists in the plan area	Vulnerable to disturbance at maternity and hibernation sites.
Myotis thysanodes Fringed Myotis	SC	Widespread in California. Occurring in all but the Central Valley and Colorado and Mohave deserts	Optimal habitat is found within pinyon-juniper, valley foothill hardwood and hardwood-conifer. Roosts in caves, crevices, mines and buildings. Uses open habitat, lakes and ponds for foraging	No records; Habitat likely exists in the plan area	Vulnerable to disturbance at maternity and hibernation sites.

Table 6-2: Special Status Wildlife Species, continued

Species	Listing Status Federal/State	Distribution	Preferred Habitats	Occurrence in the Plan Area	Reasons for Concern
Myotis volans Long-legged Myotis	SC	Common in California from sea level to 11,400 ft. elevation. Absent only from Central Valley and non-mountainous areas of the Colorado and Mohave deserts	Found in woodland and forest habitat. Feeds in forest and woodland openings and finds cover in caves, snags, under bark, rock crevices. Nursery colonies under bark, hollow trees, crevices.	No records; Habitat likely exists in the plan area	Vulnerable to disturbance at maternity and hibernation sites.
Myotis yumanensis Yuma Myotis	SC	Common and widespread in California in a wide variety of habitats below 8000 ft. elevation	Optimal habitats are open forests and woodlands with a source of water over which to feed. Occupies caves, crevices, buildings, mines, bridges.	No records; Habitat likely exists in the plan area	Vulnerable to disturbance at maternity and hibernation sites.
Scaphiopus hammondi Western Spadefoot	SC	Found throughout the Central Valley and adjacent foothills to 4500 ft. elevation.	Occurs primarly in grasslands and occassionally in valley-foothill hardwood woodlands. Most of year spent in underground burrows. Breeds in shallow pools in grasslands.	No records; Habitat is not likely to occur within the plan area	Urban and agricultural development of habitat.

Table 6-2: Special Status Wildlife Species, continued

Species	Listing Status Federal/State	Distribution	Preferred Habitats	Occurrence in the Plan Area	Reasons for Concern
Accipiter cooperii Coopers hawk	--/SSC	Breeds throughout California	Woodlands, riparian areas, and coniferous forests	No records; suitable nesting habitat exists in woodlands and riparian areas	Loss of lowland riparian forests
Falco peregrinus Peregrine Falcon	E/E	Very uncommon breeding resident and uncommon winter migrant	Breeds predominately in woodland, forest and coastal habitats with suitable cliff or cliff-like habitat.	No records; Suitable breeding habitat may exist in the plan area.	DDE induced eggshell thinning, human disturbance at breeding sites.
Haliaeetus leucocephalus Bald Eagle	T/E	Permanent resident and uncommon winter migrant. Most breeding restricted to a few northern California counties.	Large bodies of water or rivers with adjacent perches. Nests mostly in stands with less than 40% canopy near a fish bearing permanent water source.	No records; habitat exists adjacent to large water bodies.	DDT induced eggshell thinning, vulnerable to disturbance at breeding sites.
Aquila chrysaetos Golden eagle	--/SSC	Throughout California	Grasslands and savannas for foraging; woodlands and cliffs for nesting	No records; because of human disturbance and limited occurrence of suitable nest sites; it is unlikely that eagles nest in the plan area	Vulnerable to human disturbance during nesting season

Table 6-2: Special Status Wildlife Species, continued

Species	Listing Status Federal/State	Distribution	Preferred Habitats	Occurrence in the Plan Area	Reasons for Concern
Agelaius tricolor Tricolored Blackbird	SC	Common locally throughout Central Valley and in coastal areas from Sonoma county south.	Breeds near fresh water, preferring emergent wetland composed of dense tules or cattails but also blackberry thickets, willow. Highly colonial. Forages in croplands, grassy fields, wet areas.	No records; Limited habitat likely exists within the plan area.	Urban and agricultural development of habitat. Loss of wetlands.
Dendroica petechia Yellow warbler	--/SSC	Streamside habitats throughout California	Riparian forests and scrub habitats	No records; habitat exists along riparian corridors	Loss of riparian habitats
Icteria virens Yellow-breasted chat	--/SSC	Throughout California but uncommon	Riparian forests with perennial water	No records; riparian areas marginal with no nesting expected	Loss of riparian habitats
Plecotus townsendii townsendii Townsend's western big-eared bat	C2/SSC	Widespread throughout California	Caves for roosting, usually near water	No records; suitable caves or breeding areas have not been identified	Vulnerable to disturbance at breeding sites
Bassariscus astutus Ringtail	--/FP	Widespread in foothill chaparral and valley riparian habitats of California	Riparian forests, brush, woodlands	No records; habitat marginal, not expected to occur	Loss of riparian forests

Table 6-2: Special Status Wildlife Species, continued

Status Explanation: potential to occur based on presence of potential habitat

Federal (U.S. Fish and Wildlife Service):

T	Listed as threatened under the Federal Endangered Species Act.
C2	Category 2 candidate for federal listing; includes species for more information is needed.
SC	Species of Concern

State (California Department of Fish and Game):

E	Listed as endangered under the California Endangered Species Act
FP	Fully protected under the California Endangered Species Act.
SSC	Species of special concern.

Regulations and Policies Influencing Biological Resources

Various state and local regulations and policies influence the protection of biological resources. Key issues summarized include preservation of oak woodland and protection of riparian communities and wetlands.

Oak Woodland Communities. Many oak trees within this community are 100-300 years old, representing California's natural heritage. The distribution of oak woodland in California, especially valley oak communities, has declined. This loss has led CDF, CNPS, and The Nature Conservancy (TNC) to identify the conservation and management of oak woodlands as major issues. Additionally, the California State Senate passed a resolution identifying the conservation of oak woodlands as a priority of state agencies when authorizing actions and projects (Senate Concurrent Resolution No. 17, January 18, 1989). Placer County acknowledges the value of native trees and the County Tree Preservation Ordinance prohibits the removal of landmark or preserved trees or groves of native trees, native tree corridors, and significant stands of native tree habitats for new development projects without County approval.

Riparian Communities. Riparian habitats have declined substantially compared to their historical distribution and condition. Substantial statewide decline of riparian communities in recent years has led state and federal agencies to adopt policies to arrest further loss. DFG has adopted a no-net-loss policy for riparian habitat value. The USFWS mitigation policy identifies California's riparian habitats in Resource Category 2, which recommends no net loss of existing habitat value (46 FR 15: 7644, January 23, 1981). In addition to state and federal policies, Placer County's Tree Preservation Ordinance prohibits removal of trees from riparian areas without prior identification of environmental impacts and mitigation measures. Some riparian areas may also qualify as wetlands under Section 404 of the CWA and would be regulated by the Army Corps of Engineers (ACOE).

Wetlands. Past land conversion to agricultural and urban uses has eliminated nearly 90% of California's wetlands. The ACOE, DFG, and Placer County have policies and laws that regulate impacts on wetlands.

The U.S. Army Corps of Engineers regulates discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the CWA. Projects that would result in the placement of dredged or fill material into waters of the United States require a Section 404 permit from the Corps.

DFG regulates activities that would interfere with the natural flow of or substantially alter the channel, bed, or bank of a lake, river, or stream. These activities are regulated under California Fish and Game Code Section 1601 for public agencies and Section 1603 for private individuals. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. Additionally, DFG has adopted a no-net-loss policy for wetlands (Executive Order 11190, California Fish and Game Commission 1987).

The Placer County Board of Supervisors recognizes wetlands as a significant natural resource that should be protected and has adopted a wetland mitigation banking resolution (#92-365, adopted December 8, 1992). Under this resolution, the County states that avoidance and protection of wetlands should be a first priority and, where avoidance is not possible, wetland disturbance should be mitigated with in-kind, on site resources. When on-site mitigation is not feasible, the County has determined that "mitigation shall occur at designated wetland mitigation bank sites once a wetland mitigation banking program has been established."

IMPACTS

Criteria for Determining Significance

Impacts on vegetation and wildlife resources will be significant if implementation of the Vegetation Management Project will result in any of the following:

- substantial local loss of common natural communities that provide habitat for wildlife;
- disruption of natural wildlife movement corridors;
- fragmentation or isolation of wildlife habitats, especially riparian, oak woodland, and wetland habitats;
- removal, filling, grading, or disturbance of wetlands and riparian and stream corridors;
- removal of:
  - landmark or preserved trees,

- more than 50% of the trees in a Tree Preservation Zone (County Code 36.320), or

- groves of native trees, native tree corridors, and significant stands of native tree habitats that may be protected under the Placer County Tree Preservation Ordinance; or

° direct mortality, substantial reduction in local population size, lowered reproductive success, or habitat fragmentation of:

- plants qualifying as rare and endangered under CEQA,

- plants and wildlife that are state- or federally listed threatened or endangered species,

- substantial portions of local populations of candidates for state or federal listing or CNPS List 1 or 3 species, or

- substantial portions of local populations of California wildlife species of special concern.

° substantial degradation of in-stream habitat for fisheries resources;

Relevant Community Plan Goals, Policies, and Implementation Programs

The Community Plan includes numerous key goals, policies, and implementation programs that call for the protection of biological resources.

Preserve and protect the valuable vegetation resources of Meadow Vista.

Continue to enforce the Placer County Tree Preservation Ordinance.

Create, preserve, and enhance open space lands to maintain the natural resources of Meadow Vista and to protect wildlife habitats.

Protect and enhance the natural qualities of Meadow Vista's streams, creeks, and groundwater by requiring sensitive habitat buffers.

Protect wetland communities and related riparian areas throughout Meadow

Vista as valuable resources.
Implement Placer County's wetland mitigation banking program.

Provide for the protection of rare, threatened, and endangered species and habitats that support those species.

Require field studies for special-status species.

Provide for the protection of rare, threatened, and endangered species and habitats that support those species.

Impact Analysis

Sensitive Natural Communities and Wildlife Habitats

Valley Oak Woodland. Implementation of the Vegetation Management Project as proposed would result in probable loss of individual oak trees. Individual oaks, however, could be removed to reduce fuel loading, or indirectly as affected by soil disturbance and soil compaction. The extent of oak loss cannot be assessed at this time; however, future development in the Plan area could contribute incrementally to statewide loss of Valley Oaks in California. Significant impacts to the wider Valley Oak Woodland community is not anticipated given the limited extent of tree removal. The intent of vegetation management is to reduce the fuel load in an area, not eliminate it. If oaks are an abundant tree in an area, they will continue to be following treatment.

The loss of individual oaks could result in localized displacement of wildlife species that depend on oaks for roosting, foraging, breeding, and movement corridors.

Riparian and Stream Habitats. Approximately 102 acres of the Plan area are included in the Riparian Drainage land use designation which includes major stream and riparian corridors. Implementation of the Vegetation Management Project as proposed could result in the degradation of riparian and stream habitats without restricted activity.

Wetlands. Because wetlands do not provide conditions for heavy fuel loading, no activity as a result of the project is expected and no impacts to wetlands would occur.

Common Natural Communities and Wildlife Habitats

Ponderosa Pine Forest and Foothill Woodland. Implementation of the project as proposed would result in loss of individual trees and portions of the understory and the displacement of wildlife commonly associated with these habitats. No adverse impacts to the larger plant communities would occur, however. From a botanical perspective, these communities and the native trees comprising the communities are common in the Community Plan area and surrounding region.

Ponderosa pine forest and foothill woodland and the dominant plant species that occur in these communities are not currently threatened in California. Placer County's Tree Preservation Ordinance regulates some activities that would occur in groves of native trees, native tree corridors, or significant stands of native tree habitats.

Chaparral. Implementation of the project would result in loss of limited chaparral acreage, a common habitat in the foothill region. This impact is considered less than significant because only minor amounts of chaparral would be removed and chaparral habitats are locally and regionally common. No mitigation is recommended.

The removal of brush and soil disturbance often leads to areas being invaded by invasive plant species such as poison oak, annual European grasses, and star thistle. The Placer County Agricultural Commissioner can give advice to individual landowners on how to treat undesirable plants. For many areas, maintenance mowing of any re-sprouting or invading vegetation will keep such new growth in check.

Special-Status Species

Special-Status Plant Species. Vegetation removal and other soil disturbance activities associated with the project could result in impacts on special-status plant species that occur in oak woodland and riparian habitats. The magnitude of this impact is impossible to assess because some of the Community Plan area has not been inventoried for special-status plants.

This impact is potentially significant because several of the special-status plants are restricted in distribution and are considered a significant natural resource in California.

Special-Status Wildlife Species. Vegetation removal activities could cause direct mortality, lower reproductive success, reduce population sizes, and fragment habitats of special-status wildlife species. The magnitude of these impacts are difficult to assess because the locations of special-status wildlife species, if any, are unknown at this time. Special-status wildlife species could occur in any habitat type in the Community Plan area but are most likely to occur in riparian habitats.

This impact is considered potentially significant because several of the special-status wildlife species are restricted in distribution and protected by state law.

Wildlife Species of Special Interest

Implementation of the project could result in the possible loss of habitat for species of special interest (i.e., mule deer, California quail, wild turkey, mountain lions, and bobcats) through fragmentation of habitats and disruption of movement corridors. This impact is considered potentially significant because these species are of special interest in the Community Plan area.

Fisheries Resources

Implementation of the project as proposed could result in incremental increases in urban runoff into watercourses and increases in sedimentation and turbidity in creeks and tributaries from increased soil erosion. Reduction of water quality could limit fish abundance and distribution by decreasing survival or growth at various life stages (egg, fry, etc.) or by avoidance of biologically important habitat. This impact is considered potentially significant.

California Wildlife Habitat Relationships (CWHR) Analysis

The California Wildlife Habitat Relationships System (CWHR) is an integrated information system on California's wildlife. The CWHR System contains life history, habitat relationships, and management information for 650 species of amphibians, reptiles, birds, and mammals considered to be regularly occurring in California. The two-condition query option of the database allows the user to define two vegetation conditions (i.e. before and after project) so that predicted species lists and habitat suitability values can be compared. A weighted habitat value comparison report was developed for analysis of impacts associated with the proposed PTEIR project. This report lists average habitat suitability values for each species and vegetation condition

(habitat) in the project area which is then multiplied by habitat weights (typically acres of habitat) provided by the user. The habitat units resulting are then summed across all vegetation conditions and the total number of habitat units are listed. The difference in habitat units between the pre-project and post-project vegetation conditions determines whether habitat increases, decreases, or exhibits no change with project implementation.

For the Meadow Vista analysis, vegetative types from the Meadow Vista Community Plan EIR were the starting point for developing suitable vegetation maps for the CWHR run. From this information base, vegetative types were refined to include size classes and canopy closures. Adjustments were based on field inspections and aerial photography. The maps were digitized to determine acreages.

The Meadow Vista vegetation management project proposes three management "zones" in which slightly different silvicultural practices would occur. Within the plan area, 49% of the acreage would be defensible space around structures (3,422 acres); 48% would be defensible landscape areas (3,318 acres); and 3% would be shaded fuelbreaks (239 acres). Within each area, silvicultural practices will only allow changes to canopy density, with no significant changes to the overall species type or size class. An assumption was that all existing vegetation types are distributed equally within each of the three management zones.

One modeling system limitation is that riparian areas in and immediately adjacent to watercourses are not represented within the vegetation type map or the associated acreages because they are too narrow to be accurately mapped. However, because the PTEIR requires buffers along watercourses and prohibits vegetation removal in or immediately adjacent to any watercourse, riparian areas will see no significant changes to species occurrence, size of vegetation, or density of the canopy within these buffers.

Based on CWHR's four density classes (canopy closure of 60-100%, 40-59%, 25-39%, and 10-24%), estimates were made on how current density would change if every parcel within the three management "zones" were to treat existing vegetation to the maximum level to achieve fire safe goals. To model this change, areas were assumed after treatment to move to the next lowest category of canopy coverage. For example, an area with 60-100% canopy closure would move to the next lowest category of 40-59% canopy closure. Areas currently with 10-24% canopy cover, however, would remain within this class.

Existing adjusted vegetation maps and associated acreage were used to calculate new acreages to reflect all landowners carrying out the maximum size projects. CWHR was then run comparing the current acreage habitat values and the values that would occur in the future if all landowners completed all projects. This

approach constitutes an analysis of the extreme case, which is unlikely to actually occur (not all landowners will do projects, nor will all projects occur at once).

The initial CWHR run included 191 individual species and their habitat requirements in the plan area including six species of amphibians, 117 bird species, 47 mammals, and 21 reptiles. The habitat values for 125 species increased while habitat for 33 species decreased. Habitat for the remaining 33 species showed no appreciable change.

A summary of the maximum impacts to species would be:

Amphibians:	habitat reduction for Ensatina (salamander) of 3% habitat increase for Western Spadefoot Toad of 4%
Birds:	habitat reduction for Hermit Thrush of 12% habitat increase for Song Sparrow of 420%
Mammals:	habitat reduction for Western Grey Squirrel of 13% habitat increase for Broad-footed Mole of 420%
Reptiles:	no species had habitat reduction predicted habitat increase for Coachwhip (snake) of 152%

Overall, this initial CWHR run indicates the potential for habitat reduction for 17% of the species that might occur within the Meadow Vista area and a corresponding increase in habitat for 65% of the potential species in the area.

A second set of CWHR runs for Meadow Vista was conducted by Ronald F. Schultze, State Biologist with the Natural Resources Conservation Service, with the intent to compare urbanizing impacts as allowed by the Meadow Vista Community Plan to proposed project impacts. It has been proposed that shaded fuelbreaks will be primarily installed in the ponderosa pine and montane hardwood habitats (including urbanized inclusions) in Meadow Vista. In recognition of this factor, the model run estimated that 20% of the area designated as ponderosa pine or montane hardwood-conifer include urbanized habitat. An additional run projected the difference between

vegetation management only in this area versus development to large-lot urban uses as provided for in the Meadow Vista Community Plan.

In converting the 20% urbanized habitat to fuelbreaks, the CWHR run predicts that the habitat value for 72 species will be negatively affected. The decrease in value, however, will be less than 5% for 60 of the 72 species. On the other hand, CWHR predicts that 102 species will have habitat values increased, including 41 species that will realize a 15% or greater increase in habitat. The printout for the CWHR model runs is included in Appendix D.

In converting the habitat to urban uses, 123 species had an increase in habitat values and only one species shows a decrease in habitat value. However, the conversion to urban uses results in the complete loss of habitat for 47 species. This evaluation shows that impacts to existing vegetation and habitat as discussed in this PTEIR will be much less than what will occur when development is built out in accordance with current land use designations.

It must be pointed out that the CWHR process looks only at broad trends in habitat reduction and does not preclude impacts to individual species of wildlife on a specific acreage. For this reason, Forest Practice Rules require a site specific biological assessment and the development of mitigation measures based on the findings of the assessment.

California Forest Practice Rules Requirements

All applicable Forest Practice Rules will apply to any PTHP undertaken pursuant to the PTEIR. The following Rules are particularly relevant for biological resources. As part of the project description, they will reduce many potential impacts to a less than significant level.

1. Timber operations shall be planned and conducted to maintain suitable habitat for wildlife species. These provisions are in addition to those directly or indirectly provided in other rules of the Board of Forestry. (939)

2. The PTHP shall contain a statement that no significant impacts would occur to any threatened or endangered plant or animal species in the area of the PTHP. (1092.9(g))

3. Existing Board of Forestry watercourse protection regulations provide for the identification of man-made watercourses (class IV watercourses), and requires protection of those resources. (936.4)

4. The protection and WLPZ widths for Class III and Class IV waters shall prevent the degradation of the downstream beneficial use of water and shall be determined on a site-specific basis. (936.4(c))

5. The timber operator shall not construct or reconstruct roads, construct or use tractor roads or landings in Class I, II, III or IV watercourses, in the WLPZ, marshes, wet meadows, and other wet areas except as follows:

    a. At prepared tractor road crossings as described in 934.8(b).
    b. Crossings of Class III watercourses which are dry at the time of timber operations.
    c. At existing road crossings
    d. At new tractor and road crossings approved as part of the Fish and Game Code process (F&GC 1600 et seq.) (936.3)

6. Watercourse protection rules provide for exclusion of heavy equipment from Watercourse and Lake Protection Zones (WLPZ). A distribution of conifers must be left within the zone. (936.4)

7. Where significant adverse impacts to non-listed species are identified, the RPF and Director shall incorporate feasible practices to reduce impacts as described in 14 CCR 898. (939.4)

MITIGATION

See also mitigation measures in Chapter 4 - Hydrology and Water Quality

1. Each proposed PTHP shall have proposed operating areas inspected by a qualified RPF or other qualified professional for the potential presence of any listed, threatened, or endangered species of plant or animal. No impacts to any listed species will be allowed.

2. Adjust the timing of vegetation management activities to avoid impacts on listed wildlife species, including actively nesting birds.

3. Avoid mechanical clearing in rare natural communities, including areas with special status plants.

4. Clean all equipment off-site to limit the spread of invasive plant species.

5. Encourage retention of Valley Oak areas within the community, and favor Valley Oak reproduction in those areas where it currently exists. Valley oak areas will be identified by individual landowners and retention will be encouraged.

6. Prohibit operations in any WLPZ except removal of dead/dying trees for public safety purposes and fire protection. All class I & II WLPZ watercourse corridors will otherwise remain intact.

7. Retain significant stand structure that will continue to be used for wildlife by restricting silvicultural harvest methods.

Level of Significance Following Recommended Mitigation

With implementation of recommended mitigation measures, potential impacts to biological resources will be reduced to a less than significant level.

Chapter 7. Cultural Resources

Meadow Vista was inhabited by the Nisenan or Southern Maidu at the time of Euro-American contact. The Hill Nisenan, commonly referred to as Maidu, differed from the Valley Nisenan of the Sacramento Valley in dialect, environment, and lifestyle. The Nisenan, together with Maidu and Konkow, are part of a subgroup of the California Penutian linguistic family. Hill Nisenan occupied territory that stretched from the American and Cosumnes Rivers in the south to the Yuba and Bear Rivers in the north. Their villages were located on ridges and large flats along major streams.

The Nisenan Maidu lifestyle was based on hunting and gathering from rich natural resources, including abundant game animals, fish, fowl, fruits, and acorns. The Nisenan Maidu established many villages in the foothills, moving among them in seasonal migrations based on the weather, food gathering, and other necessities.

Grinding stones still exist on the east side of Placer Hills Road in front of the former Meadow Lark Bookstore. Arrowheads have been found throughout the area. The burial grounds were near the Bear River, the west boundary of Meadow Vista. Richard Simpson, a Meadow Vista native from a pioneer family, wrote a book called Ooti that chronicles the process of turning acorns into a food staple. The photographs and text of Simpson's book record Lizzie Enos, a local Nisenan Maidu woman, grinding, leeching, and cooking acorns into the porridge and bread that were dietary staples of the Nisenan Maidu. The blue oak and black oak trees that were such a prominent feature of the landscape of the foothills during that period were revered by the Nisenan Maidu for their majestic appearance and the live-giving nourishment they provided.

The discovery of gold in the area during the middle 19th century resulted in an enormous influx of EuroAmericans and the subsequent near extinction of the Hill Nisenan population, culture, and language.

Previous Cultural Resource Surveys

This section is based on a record search for the Plan area conducted by the North Central Information Center in May 1994 as part of the Meadow Vista Community Plan update. According to the Center's records, seven archeological field surveys have been conducted in portions of the Plan area. Approximately one quarter of the Plan has been previously surveyed at some level. Two of the largest surveys, Lindstrom (1982) and Woodward (1981) are over 10 years old and were not complete or comprehensive field inspections.

Substantially less than one quarter of the Plan area has been surveyed comprehensively according to current standards. The older studies did not always address historic archeological resources or standing structures. In addition, ground visibility conditions can change considerably in 10 years and it is possible that resources hidden by vegetation or buried at the time of the initial survey are visible under current conditions.

Approximately 50 cultural resource sites have been recorded (with completed site records) or reported (noted only in report texts) in or immediately outside the Plan area. Some of these resources are characterized as sites or buildings, while others are isolated artifacts or features. Two of these resources have historic and prehistoric components. Six of the sites have been assigned official state trinomials (CA-Pla-XXXX), but the rest have not yet been formally reviewed and processed.

The prehistoric sites include three former village sites (middens), many with associated surface artifacts and bedrock mortars (grinding rocks) (CA-Pla-540, 541, and 544). Eighteen other sites consist primarily of bedrock mortars, some with scattered artifacts or debris from stone tool manufacturing (subsurface deposits may be present at some of these sites but testing was not done during the survey phase). These include CA-Pla-542 and 543, HN-1, 16898PLCRH, and Lindstrom Site Nos. 1-3 and 5-12. Three isolated prehistoric specimens were also noted by Lindstrom.

Historical Archeological and Architectural Resources

The historic archeological sites or features include four formally recorded historic archeological sites and 19 recorded buildings. The Placer County Cultural Resources Inventory includes historical resources inventory forms for 20 properties in the Plan area. Nineteen of these are buildings, primarily houses, and one is a prehistoric archeological site. The four archeological features include the Bear River and Bowman Feeder Canals (which were recorded on the same record form), one rock wall alignment, and two historic dumps (Lindstrom's Site Nos. 4, 5, and 8).

An unrecorded section of the Boardman Canal also crosses the project. A few miles to the southwest, a section of this canal is recorded (CA-Pla-670-H). Several isolated features were noted by Lindstrom, including a chrome mine, a concrete slab, and a series of 10 possible mining glory holes. A possible historic/ethnographic cemetery, dating to 1857, was reported verbally by archeologist Susan Lindstrom for a location just along the boundary of the Community Plan (these are the burial

grounds referred to earlier near the Bear River that were relocated in the 1930s and called "Sunny View Indian Cemetery"). No further information is available at this time.

Area canals or ditches include the Gold Hill, Bear River, Upper Bowman, Bowman Feeder, and Boardman. Many of these features were first constructed during the Gold Rush or around the turn of the century. In spite of their modernization, they are considered potential historic resources. Original sections still exist, and associated features such as early-day artifacts may be buried alongside the alignments. As noted above, three of these canals have been partially recorded as historic archeological features during the course of archeological field surveys.

No National Register of Historic Properties (NRHP), State Landmarks, or California Points of Interest are located in the Meadow Vista Community Plan area. The nearest such feature is the route of the First Transcontinental Railroad (now the Union Pacific line) located just to the east. This is designated at Landmark 780 with monuments at Auburn and Colfax. Clipper Gap (bordering the Plan area), a station on the railroad and established in 1856, is listed in the California Inventory of Historic Resources. Six of the bridges within or directly adjacent to the Plan area have been evaluated by Caltrans and do not meet the criteria for listing in the NRHP.

Areas of Sensitivity

The use of high, medium, and low sensitivity indicates the relative probability of archeological and historical sites in a given area in comparison to other areas in the same region. The most significant cultural resource could be found in a low-sensitivity area. Based on the information concerning historical resources, and previous investigations, the Plan area appears to reflect the full range of sensitivity values. Zones along the Bear River and adjacent to the several smaller drainages, especially in the valley-like flats, are of the highest sensitivity. Historical sensitivity is high in these same areas and includes other zones, such as the old roadway margins, canal routes, and settlement areas like Meadow Vista and Christian Valley. Ridge tops and moderate slopes are estimated to be of moderate sensitivity, while steeper slopes are likely to be the least sensitive.

Paleontological Resources

Paleontological resources are not included in this section because such resources have not been identified nor are they expected to be found in the Plan area.

IMPACTS

Criteria for Determining Significance

Regulations for dealing with historical properties are outlined in Appendix K of the State CEQA Guidelines and Public Resources Code Section 21083.2. Under CEQA, the impacts on historical and prehistoric resources must be considered. An impact is considered significant if the project will cause damage to an important or unique cultural resource that:

- is associated with an event or person of recognized significance in California or American history or of recognized scientific importance in prehistory (III-A);
- can provide information that is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions (III-B);
- has a special or particular quality as oldest, best example, largest, or last surviving example of its kind (III-C);
- is at least 100 years old and possesses substantial stratigraphic integrity (III-D); or
- involves important research questions that historical research has shown can be answered only with archaeological methods (III-E).

Appendix K of the State CEQA Guidelines also states that if avoidance of important archaeological resources is infeasible, the effects of the project on the qualities that make the resource important should be mitigated.

A similar and related set of criteria is that used to determine eligibility for inclusion of a site in the NRHP (36 Code of Federal Regulations 800). The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association and:

1. that are associated with events that have made a significant contribution to the broad patterns of our history;

2. that are associated with the lives of persons significant in our past;

3. that embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

4. that have yielded, or may be likely to yield, information important in prehistory or history.

Relevant Community Plan Goals, Policies, and Implementation Programs

The Community Plan includes various key goals, policies, and implementation programs that call for the protection of cultural resources.

Require Site-Specific Cultural Resources Studies

Require that Historical Sites Be Avoided and Protected from Destruction or Demolition

Impact Analysis

As noted, less than one quarter of the Plan area has been surveyed comprehensively according to current standards, and cultural resources may be evident now that were not visible in previous surveys.

Community Plan goals, policies, and implementation programs require discretionary development projects to identify and protect important cultural resources. Preparation of a site-specific survey and report is required of all projects subject to a PTHP.

Implementation of the Vegetation Management Project could result in the possible disturbance of documented or undocumented cultural resources (archaeological or historical resources). This impact is considered significant because the project could disturb potentially important cultural resources and because the various sites and historical structures contribute to the historical fabric of the area.

California Forest Practice Rules Requirements

All applicable Forest Practice Rules will apply to any PTHP undertaken pursuant to this PTEIR. The following Rules are particularly relevant for cultural resources. As part of the project description, these Rules will reduce many potential impacts to a less than significant level.

1. Regulations for a PTHP contents require a Confidential Archaeological Addendum as defined in 895.1 or a statement by the RPF that the PTHP has been surveyed in accordance with current Forest Practice rules and no additional sites have been found. (1092.9(f))

2. The Confidential Archaeological Addendum (895.1) and its contents (949.1) require that the archaeological survey by a qualified surveyor must discuss resources found and how they will be protected.(949.2, 929.6)

MITIGATION

1. Project areas will be surveyed by a qualified RPF or other qualified professional for potential archaeological and historical resources prior to project implementation.

2. No timber operations may occur on significant archaeological sites.

3. If an archaeological or historical site is discovered during vegetation management operations, work will immediately stop within 100 feet of the site and the CDF Director shall be notified. The significance of the resources shall be determined and necessary protection measures taken. For significant cultural sites that cannot be avoided, site-specific mitigation measures must be approved by the CDF Director.

Level of Significance Following Mitigation

With implementation of proposed mitigation measures, potential impacts to cultural resources will be reduced to a less than significant level.

Chapter 8. Noise

Noise is often defined simply as unwanted sound and thus is a subjective reaction to characteristics of a physical phenomenon. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold of 20 micropascals as a point of reference, defined as 0 decibels (dB). Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range.

The decibel scale allows a millionfold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in decibel levels correspond closely to human perception of relative loudness.

Noise in the community has often been cited as being a health problem, not in terms of actual physiological damage such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. When community noise interferes with human activities and contributes to stress, public annoyance with the noise source increases and the acceptability of the environment for people decreases.

To control noise from fixed sources, many communities have adopted noise-control ordinances. Such ordinances abate noise nuisances and control noise from existing sources. They may also be used as performance standards to judge potential nuisances or potential encroachment of sensitive uses on noise producing facilities. Community noise ordinances are generally designed to resolve noise problems on a short-term basis, usually by means of hourly noise-level criteria.

Existing Noise Conditions

The primary existing noise sources are traffic on I-80 and local roads. Fixed noise sources include the Meadow Vista Transfer Station and Chevreaux Quarry, as well as parks and schools that encourage recreational activities. Noise sensitive land uses include residential uses, schools, and churches.

IMPACTS

Criteria for Determining Significance

The State CEQA Guidelines, Appendix G, state that a project will normally have a significant effect on the environment if it will:

- substantially increase the ambient noise levels for adjoining areas.

Professional interpretation of this definition that a project will normally have a significant effect on the environment if it will:

- expose people to severe noise levels
- generate noise that would conflict with local noise standards or ordinances.

An increase in noise of 3 dB or less is typically not noticeable. An increase in noise of 5 dB is distinctly audible and is generally used as the threshold for a significant noise increase. A 10-dB increase is typically perceived as a doubling of loudness. Consideration is given to the perceptibility of changes in noise levels in assessing significance at existing sensitive receptors using a change of 5 dB as the threshold for a significant increase.

Impact Analysis

The proposed project has the potential to generate noise from equipment used in the vegetative management process. This equipment includes chain saws, chippers, and other heavy equipment. Table 8-1 shows typical construction equipment noise levels as could be used in vegetation management.

Actual noise levels experienced at residences would involve several pieces of many kinds of equipment. Since noise from localized sources typically falls off by about 6 dB with each doubling of distance from source to receptor, outdoor receptors within 1,600 feet of construction sites, and which have an uninterrupted view of the construction site would experience noise greater than 60 dBA when noise on the construction site exceeds 90 dBA. Since at this time, the number, type and location of each kind of equipment being used is not known, it is not possible to accurately predict the noise level at the residences. Noise insulation provided by the walls, windows and doors of the buildings would partially abate construction noise. A 20

dBA reduction is typical of most residential structures, provided the windows are closed. Desirable outdoor levels of 60 dBA for residential uses and 45 dBA indoors could be exceeded during the course of vegetation management. This is considered a significant effect.

Table 8-1
Construction Equipment Noise Levels

Equipment Type	Noise Level at 50 Feet
Backhoe	85 dB
Tractor	80 dB
Trucks	91 dB
Chipper	85 dB
Chain Saw	76 dB

Source: "Noise from Construction Equipment and Operations, Building Equipment and Home Appliances," prepared by Bolt, Beranek and Newman for the U.S. EPA, December 31, 1971; Chipper and chain saw measurements by Placer County Resource Conservation District, 1997.

MITIGATION

1. Restrict operation of chainsaws and other power-driven equipment to the hours between 7:00 a.m. and 9:00 p.m.. The operation of all other power equipment, except highway vehicles, within 200 feet of an occupied dwelling shall be restricted to the hours between 7:00 a.m. and 9:00 p.m., and shall be prohibited on Sundays and nationally designated legal holidays.

Level of Significance Following Mitigation

Implementation of the recommended mitigation measure would reduce potential noise impacts to a less than significant level.

Chapter 9. Air Resources

The project area experiences cool, moist winters and hot, dry summers. The prevailing wind direction is from the south, although winds from the northwest are also common. The region experiences temperature inversions that limit atmospheric mixing and trap pollutants, resulting in high pollutant concentrations near the surface. Surface inversions (0-500 feet) are most frequent during winter, while subsidence inversions (1,000 - 2,000 feet) are most common in the summer.

The Placer County Air Pollution Control District (PCAPCD) is responsible for maintaining and improving air quality throughout Placer County. The PCAPCD published its first Air Quality Attainment Plan (AQAP) in 1991. This plan was designed to bring Placer County into compliance with the state ozone standards, which are equal to or more stringent than existing federal ambient standards.

Both the state and federal governments have established ambient air quality standards for several different pollutants. For some pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). The pollutants of greatest concern in Placer County are carbon monoxide (CO), ozone, and particulate matter less than 10 microns in size (PM_{10}).

Placer County is divided into the Sacramento Valley, Mountain Counties, and Lake Tahoe Air Basins. Meadow Vista is in the Mountain Counties Air Basin. The Mountain Counties Air Basin is classified as a nonattainment area for the state and federal ozone standards and nonattainment for the state PM_{10} standard. The basin is classified as an attainment area for federal CO standards and is unclassified for state CO standards (unclassified areas have no monitoring stations because it is assumed that standards are not exceeded).

EPA has promulgated new standards for particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). For $PM_{2.5}$, the new standards are an annual average of 15 micrograms per cubic meter (ug/m^3) and a 24-hour average of 65 ug/m^3. Under the regulatory review process, Congress still has an opportunity to review the standards before implementation. Before compliance with these standards could be enforced, each air district would need to establish their attainment status, probably by monitoring. Because this has not been regulated, there is little existing $PM_{2.5}$ data

available. Implementing the measures designed to meet the new standards is expected by EPA to take some time.

IMPACTS

Criteria for Determining Significance

According to the State CEQA Guidelines (Section 15064[e] and Appendix G), a project will normally have a significant impact if it will:

- violate any ambient air quality standard
- expose sensitive receptors to substantial pollutant concentrations
- create objectionable odors

Relevant Community Plan Goals, Policies, and Implementation Programs

The Community Plan includes key goals, policies, and implementation programs that relate to the protection of air quality as it relates to vegetation management:

9.L.4. The County shall discourage open burning of leaves (except leaves still attached to branches).

9.L.5. The County shall encourage reuse or alternative disposal of brush and wood, including use as firewood and chipping followed by the use as mulch, compost or biomass.

9.L.8. The County shall encourage public education programs relative to the use of methods other than outdoor burning for disposal of leaves and vegetative material and use of fuel-efficient wood stoves.

Impact Analysis

Implementation of the Vegetation Management Project would result in air emissions from associated activities. The major sources of air pollution are total and reactive organic gases (TOG and ROG) and oxides of nitrogen (NOx) emissions from heavy equipment exhaust (both precursors to ozone), and wind-blown dust from earth disturbance. In addition, disposal of wood/vegetative waste by open burning can

create substantial emissions of PM_{10} as creating a visual nuisance. These impacts are considered significant because of the potential of PM_{10}, ROG and NOx above the Placer County PCAPCD threshold levels.

Open burning of vegetation and leaves produces emissions of PM_{10}, CO, NOx, ROG, and other compounds. Emissions are highly variable and depend on a number of factors, including fuel dryness and fire type (smoldering or flaming). Dispersion characteristics of emissions depend on weather conditions.

To compare emissions from a catastrophic fire with those from potential fuel burning from the proposed project, Table 9-1 has been prepared by CDF. The table shows that controlled burns under the PTEIR vegetation management project would significantly reduce overall emissions of target pollutants. The PTEIR project will, of course, not happen all at once, but be spread out over several years, further reducing impacts. If the removed fuels were burned at once, however, the total reductions in pollutants compared to a catastrophic fire would be approximately 2,690 tons of TOG; 435 tons of NOx; 4,490 tons of suspended particulates; and 27,985 tons of CO. This significant reduction demonstrates the air quality values of fuel reduction by preventing the catastrophic fire or substantially reducing its range and destructive characteristics.

The Meadow Vista Vegetation Management Project contains an important provision that will significantly reduce air emissions and the nuisance effects of smoke. Burning of slash and harvested debris will be limited when undertaken within the PTEIR process. Burning will be encouraged only if other methods of disposal are unavailable or prove infeasible, or when denial of burning would pose a risk of imminent and substantial economic loss. Limited burning which does take place would be in compliance with burn regulations established by the Placer County PCAPCD.

As vegetation is removed and thinned adjacent to roadways, residents could be exposed to greater levels of traffic related emissions. Vegetation does to some degree filter out pollutants through taking in carbon dioxide and giving off oxygen and water. It is also true that vegetation that remains after thinning will be more efficient in taking up carbon dioxide along the roadway. Effects on air quality are considered minor as only portions of vegetation will be removed. Homeowner's can still elect to leave a vegetative screening adjacent to the house consistent with defensible space standards.

Table 9-1 Meadow Vista Fuels and Emissions Analysis

Scenario 1: Project is Not Implemented; Entire Area Burns in Catastrophic Fire

		TOG	NOx	PM	CO	TOG	NOx	PM	CO
Fuel Type	Units Burned	Pounds/Unit Burned				Total Tons of Emissions			
Vegetation(1)	349,000 tons	25.0	4.0	42.0	260.0	4,362.5	698.0	7,329.0	45,370.0
Homes(2)	3,866 tons	13.9	4.0	10.8	168.0	26.9	7.7	20.9	324.7
Autos(3)	320 autos	7.2	0.7	17.0	21.3	1.2	0.1	2.7	3.4
Total						4,390.6	705.8	7,352.6	45,698.1

(1) Assumes available fuels of 50 dry tons/acre x 6,980 acres.
(2) Assumes 1/3 of houses burn, or 639 homes; average size 1,800 sq. ft., 21.118 tons fuel/house, 85% combustion rate.
(3) Assumes that number of autos burned is 1/2 the number of houses, or 320.

Emission factors based on CARB methodologies, Section 9.3-Wildfires, and Section 7.14-Structural and Automobile fires.

Scenario 2: Project is Fully Implemented All at Once. All Removed Fuels are Piled and Burned

		TOG	NOx	PM	CO	TOG	NOx	PM	CO
Fuel Type	Units Burned	Pounds/Unit Burned				Total Tons of Emissions			
Vegetation(1)	136,250 tons	25.0	4.0	42.0	260.0	1,704.1	272.5	2,861.3	17,712.5

(1) Assumes fuels removed at a rate 40% that of total burn (20 dry tons/ac).

Difference Between Scenarios

Total Reduction in Emissions (tons) (Scenario 1 minus Scenario 2)	2,686.5	433.3	4,491.3	27,985.6

Source: Department of Forestry and Fire Protection, September 2, 1998

California Forest Practice Rules Requirements

All applicable Forest Practice Rules will apply to any PTHP undertaken pursuant to the PTEIR. The following Rules are particularly relevant for air resources. As part of the project description, these Rules will reduce many potential impacts to a less than significant level.

1. During timber operations, road surfaces in the logging area shall be treated for stabilization (rocked, watered, chemically treated, asphalted or oiled) where necessary to prevent excessive loss of road surface materials (943.3(h)

2. Slash to be treated by piling and burning shall be treated not later than April 1 of the year following its creation, or within 30 days following climatic access, or as justified in the plan (937.2)

3. Piles and concentrations shall be sufficiently free of soil and other non-combustible material for effective burning. (937.5 (a))

4. The piles and concentrations shall be burned at a safe time during the first wet fall or winter weather or other safe period following piling and according to laws and regulations. Piles and concentrations that fail to burn sufficiently to remove the fire hazard shall be further treated to eliminate that hazard. All necessary precautions shall be taken to confine such burning to the piled slash (937.5 (a)).

MITIGATION

1. Burn only on designated burn-days stipulated by the Placer County Air Pollution Control District and with all necessary burn permits.

2. Reduce pre-burn fuel loadings by using other treatments.

3. Require material to dry before piling or allow sufficient time after piling for material to dry before burning. Piles that contain little soil and are constructed to allow air movement will result in a burn that consumes significantly more debris and produces less smoke. More efficient burning and greater heat output will lift smoke higher, reducing smoke concentration near the ground.

4. Use mass-ignition techniques that produce a short duration fire thereby increasing combustion efficiency and flow of smoke into the convection column.

5. Prevent stumps from burning and smoldering.

Level of Significance Following Mitigation

With burning restrictions contained within the PTEIR process, and with implementation of the recommended mitigation measures, impacts to air quality will be reduced to a less than significant level.

Chapter 10. Traffic and Circulation

The Plan area is served by a freeway and a network of arterial and collector roadways and local streets (Figure 10-1). Because of the predominance of large-lot, low-density residential development, automobile travel is the most important mode of transportation. I-80 serves Meadow Vista, but would not be affected by the project.

Placer Hills Road is a two-lane north/south oriented roadway that serves the heart of the Plan area. Turn lanes are provided at major intersections along Placer Hills Road, including Sugar Pine Road and Combie Road. The roadway extends from I-80 at the southern extreme of the Plan area, through the downtown area of Meadow Vista, and on north, eventually connecting to the City of Colfax (north of the Plan area). In the Downtown area, Placer Hills Road provides access to numerous adjacent land uses, resulting in reduced speeds and increased turning movement conflicts.

Collector Roadways. Collector roadways serve to "collect" traffic from local roadways and move it to arterial roadways. Speeds are typically lower on collector roadways than on arterial roadways, and an important secondary role for collector roadways is to provide access to adjacent properties. While the PCGP identifies only two collector roadways in the Meadow Vista area (Meadow Vista Road and Sugar Pine Road), Combie Road, Meadow Gate Road, Lake Arthur Road, and Volley Road also exhibit characteristics of collector roadways. All collector roadways in the Plan area are two-lane rural roadways, some with auxiliary turning lanes provided at major intersections.

Meadow Vista Road intersects with Placer Hills Road at a "T" intersection just south of the downtown area. Meadow Vista Road extends west from Placer Hills Road, serving primarily residential uses. Immediately west of Placer Hills Road, Meadow Vista Road provides access to Meadow Vista Park.

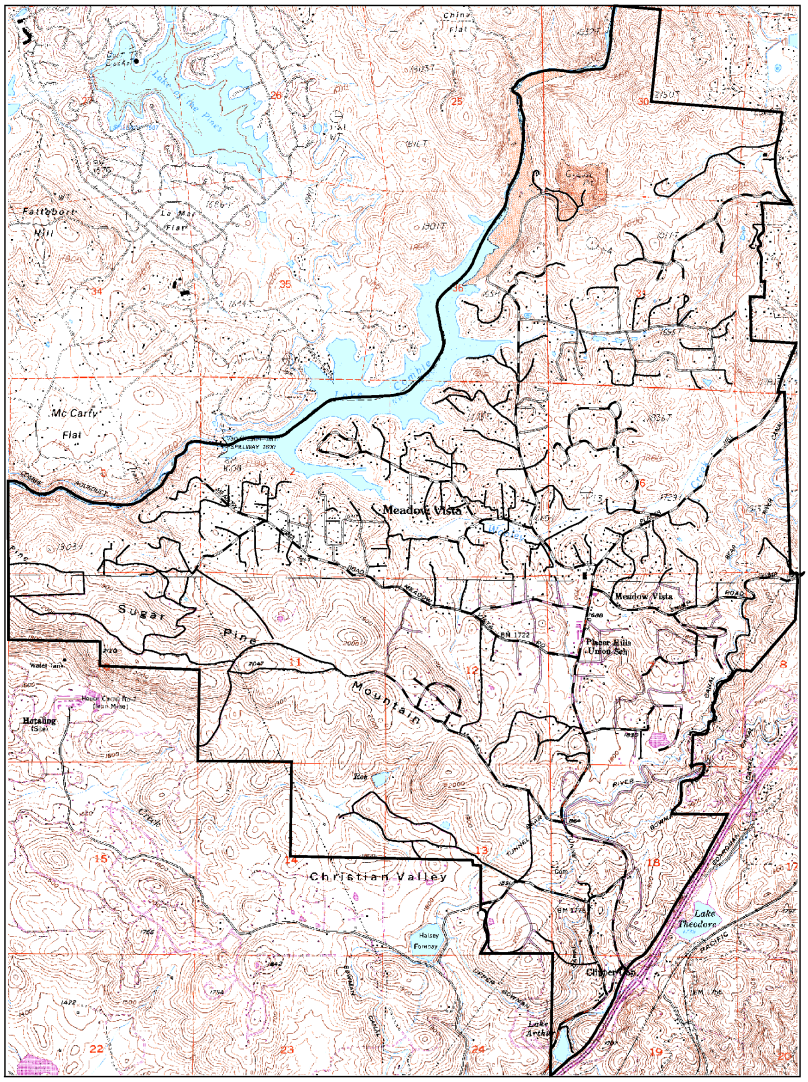
Sugar Pine Road extends west from Placer Hills Road and serves primarily residential uses. In the future, this roadway will serve as the primary means of access to the Winchester Planned Unit Development, which includes a golf course.

Combie Road extends west from Placer Hills Road serving primarily residential uses, as well as the Chevreaux gravel extraction operation and the Meadow Vista Landfill, now operated as a solid waste transfer site.

Volley Road serves residential land uses west of Combie Road, intersecting Combie Road approximately 0.5 mile west of Placer Hills Road.

Meadow Vista Community
PTEIR

Figure 10-1: Road System



Meadow Gate Road connects Placer Hills Road on the west to Lake Arthur Road on the east. The roadway intersects Placer Hills Road in the downtown area and connects to Lake Arthur Road just south of the Applegate Road interchange on I-80.

Lake Arthur Road is a frontage road paralleling I-80 from the Dry Creek Road interchange to the Applegate Road interchange. In the Plan area, it intersects Placer Hills Road immediately north and west of the Meadow Vista/Clipper Gap interchange with I-80.

In the future, the connection between Bancroft Road and Sugar Pine Road along the old county right-of-way, as well as some roadways internal to the Winchester project, will serve as collector roadways.

All roadways in the Plan area presently operate at an acceptable level of service (LOS). However, certain circulation and traffic operating conditions in the Meadow Vista community warrant special consideration and examination. For example, delays often are experienced on southbound Placer Hills Road due to the grade and the presence of loaded gravel trucks from the quarry operations at the north end of Combie Road. Because of their weight, these trucks cannot maintain highway speeds on the upgrade. This problem also exists to a lesser degree on the uphill grade from I-80 into the community. Typically, gravel trucks traveling in this direction are not loaded and therefore are better able to maintain highway speeds.

Another specific area of concern is Placer Hills Road through the downtown area. In this area, numerous driveways serve adjacent land uses. Delays are caused by turning movements and speed changes when vehicle access these driveways. Placer Hills School also is located in these area, and traffic congestion and delay are experienced when the school is opening and being dismissed.

Future Conditions

The MVCP provides a blueprint for future land development throughout the Plan area. Proposed land use development, as envisioned by the Plan, will occur in a fashion that is consistent with current land use development patterns. Few large land holdings could result in large land development projects, except for the Winchester Planned Unit Development, which was approved recently for the construction of a residential subdivision and golf course that will ultimately contain over 400 new homes. With these exceptions, most anticipated development in the Plan area will be residential infill development in the Clipper Gap area.

IMPACTS

Criteria for Determining Significance

The State CEQA Guidelines, Appendix G, state that a project will normally have a significant effect on the environment if it will:

- increased traffic hazards to motor vehicles, bicyclists, pedestrians, or equestrians.

Impact analysis

The impact to traffic flows on public roads as a result of vegetation management activities includes heavy equipment entering and exiting the road shoulder and adjacent private roads. During shaded fuelbreak activities in particular, road shoulder work may lead to delays and potential safety concerns to traffic. This impact is considered potentially significant as most major roads in the Plan area will have shaded fuelbreaks along their margins with associated work within the public right-of-way. An additional beneficial impact will be increased sight distance at road intersections and improved visibility of roadside wildlife resulting from vegetation thinning.

MITIGATION

1. Measures such as flagmen and directional traffic control shall be provided as determined by the Placer County Public Works Department when heavy equipment ingress and egress is required in the public right-of-way.

2. Encroachment permits shall be retained as needed for work in the Caltrans or County right-of-way.

Level of Significance Following Mitigation

Implementation of the proposed mitigation measures will reduce potential traffic impacts to a less than significant level.

Chapter 11. Fire Protection

Fire services are provided by the Placer Hills Fire Protection District (FPD) and California Department of Forestry and Fire Protection (CDF.) Placer Hills FPD primarily responds to structural fires and provides first-responder medical aid. CDF has primary jurisdiction over all wildland fires. Because there is little or no break in the wildland/structural interface, the two systems are interdependent, particularly during large fire activity, and in summer when fire danger is high.

Placer Hills Fire Protection District

Placer Hills FPD faces several concerns, including establishing adequate vegetation fuel management policies, identifying sources of water supply for fire suppression, recognizing the increased risk of hazardous materials spills, designing shaded fuel breaks and fire breaks, upgrading existing circulation for emergency access, assisting CDF with defensible space around structures, and vegetation management for a healthy fire safe forest. The district encompasses approximately 33 square miles (over 21,000 acres.) In 1997, the district included approximately 9,200 people, 3,200 residential dwellings, and 68 non-residential buildings. Three commercial areas and five schools are within the district.

Natural vegetation types are Ponderosa pine, brush, and oak woodland. The native, living vegetation surrounding the rural residences in the area is flammable because of its dryness, structure, and dense growth. The area has a history of high-intensity fires, especially in riparian areas along river drainages, and the possibility of a conflagration exists each summer. Narrowness, dead-end configuration, lack of road identification, and inadequate sight distances of existing roads are problems for fire service.

Placer Hills FPD operates three fire stations staffed primarily by volunteer firefighters who reside in the various communities served within the district. In the Plan area, Station No. 1 (the district office) is located at Placer Hills Road and Combie Road. The district also has stations at Applegate and Weimar. The weekday, daytime staff includes one fire marshal/captain, one fire apparatus engineer, and two firefighters at two stations. This engine coverage pattern ensures that response is immediate when many volunteer firefighters are working outside the communities that they serve. During evenings, weekends, and holidays, volunteer firefighters and officers respond to emergencies. Placer Hills FPD paid personnel includes six part-paid volunteer fire officers, including the Fire Chief, and one full-time secretary.

The district is authorized to collect fees to mitigate the impacts of new

development.

California Department of Forestry and Fire Protection

The entire Plan area is served by CDF, which is responsible for the prevention and suppression wildland fires in unincorporated areas of the state. In Placer County, CDF operates stations in Colfax, Lincoln, Auburn, Foresthill, Alta, and Higgins Corner. The Auburn station is the most likely to serve the Plan area, but all the stations could respond to a major wildfire. During summer months, five fire handcrews work throughout Nevada, Placer, and Yuba Counties to provide additional fire protection. CDF has rated most of the plan area as being in a very high fuel hazard severity zone, with small sections of high fuel hazard severity zone between I-80 and the central district and the southwest corner of the plan area.

The state has adopted fire protection regulations to establish minimum wildfire protection standards in conjunction with building, construction, and development in state responsibility areas (SRAs,) which includes all of the Placer Hills FPD service responsibility areas. The regulations do not apply to existing structures, roads, streets and private lanes, or facilities; however, they do apply to the permitting or approval of new parcels after January 1, 1991. The regulations include provisions for emergency access, road width, roadway surface, roadway grades and radius, roadway turnarounds, signage, one-way road designs, gate entrances, and street and road signs names and numbers, in addition to private water supply reserves for emergency fire use and fuel breaks and greenbelts. These requirements reduce the potential for wildland fires, decrease response times, and improve firefighter's chances of extinguishing wildland fires.

In November 1991, the Subdivision Ordinance and Project Development Standards as included in the County's Land Development Manual, were modified to incorporate the State Fire Safe Standards.

Regulatory Setting

Public Resources code 4291 requires at least a 30-foot defensible firebreak to be maintained around structures in the county, which involves removing and clearing away all flammable vegetation or combustible growth. Extra hazardous conditions may warrant additional clearing distances. By County ordinance, new development is required to provide static on site storage of water to be used in the event of fire (e.g., swimming pool or storage tank) if not connected to a water district. Placer Hills FPD has ordinances and regulations for new construction. Ordinance 92-002 (adopted on May 6, 1992,) requires the maintenance of a 30-foot clearance around structures,

with up to 150 feet of clearance required at the discretion of the Fire Chief or Fire Marshal. Ordinance 92-003 addresses disposal of flammable vegetation.

Defensible Space. Because of the potential for high-intensity fires to threaten structures in the Meadow Vista community, the Placer Hills FPD, the Placer County Resource Conservation District, National Resources Conservation Service, and CDF produced a "Defensible Space Handbook" and video tape to educate the residents of Meadow Vista (Placer Hills Fire Protection District, et. al., 1995.) The handbook recognizes that improvements to existing infrastructure are limited because of financial and other constraints. Consequently, the handbook addresses improvements to fuel loading in the Plan Area and states, "The amount of fuels can be reduced, vertical arrangement and horizontal continuity of fuels can be altered, flammable vegetation can be removed or modified, and moisture content can be increased (i.e., replace low-moisture content plants with those of higher moisture."

"Defensible space" is defined as "that area between a house and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat and which provides an opportunity for firefighters to safely defend the house." Absence of fire in recent decades has increased fuel loading in the Plan area, contributing to the potential for a high-intensity wildfire to occur. The program focuses on reducing the dead vegetation and mid-level forest vegetation of shrubs and brush and educating and empowering residents to protect their homes.

The fire season is typically mid-May through October, when weather is warm to hot with low humidity. Topography is typical of the Sierra Nevada foothills, characterized by long, narrow valleys with moderate to steep sloping hillsides. Wildfires spread four times more quickly on a 30% slope than on level terrain. South- and southwest-facing slopes are the most hazardous aspects for homes; many homes are situated adjacent to chimneys and along the canyon rim.

IMPACTS

Criteria for Determining Significance

The State CEQA Guidelines, Appendix G, does not provide guidance for determining when a project will normally have a significant impact on fire protection; however, interpretation of the CEQA guidelines indicates that a project will normally have a significant effect on the environment if it will:

- expose people or structures to increased fire hazards

- substantially increase the demand for fire protection personnel or equipment
- result in wildfire regimes outside of the normal range of natural variability

Relevant Community Plan Goals, Policies, and Implementation Programs

The Community Plan includes policies that call for the provision of adequate public facilities and services, including fire protection.

5.H.5. The County shall work with the Placer Hills Fire Protection District to identify key fire loss problems and design appropriate fire safety education programs to reduce fire incidents and losses. [Goal 4.I.4.*]

5.H.6. The County shall work with the Placer Hills Fire Protection District and implement ordinances to control fire losses and fire protection costs through fuel reduction management and the use of automatic fire detection, control, and suppression systems. [Goal 4.I.5., 12/30]

5.H.11. The County shall encourage the modification of vegetation around structures, and developments shall be required to reduce radiant heat along fire escape routes, providing for the safety of residents and fire fighting personnel. Fuel modification will reduce the intensity of a wildfire by reducing the volume and density of flammable vegetation. These areas shall provide (1) increased safety for emergency fire equipment and evacuating civilians; (2) a point of attack or defense from a wildfire; and (3) strategic siting of fuel breaks, fire breaks, and greenbelts.

5.H.12. The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for a fire safe community, defensible space fire-resistant vegetation, cleared fire breaks and fuel breaks, or a long-term comprehensive fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas of Meadow Vista. [Goal 8.C.2]

5.H.14. The County shall encourage fire protection agencies to continue education programs in schools, service clubs, organized groups, industry, utility companies, government agencies, press, radio, and

television in order to increase public awareness of fire hazards within the county, and to develop high-visibility fire prevention programs, including those offering voluntary home inspections and promoting awareness of home fire prevention measures. [Goal 8.C.6., 8.C.9.*]

5.H.15. The County shall work with the local fire protection agencies, the California Department of Forestry and Fire Protection (CDF,) and the U.S. Forest Service to promote the maintenance of existing fuel breaks and emergency access routes for effective fire suppression. [Goal 8.C.7.]

5.H.17. The County shall continue to work cooperatively with the California Department of Forestry and Fire Protection and local fire protection agencies in managing wildland fire hazards. [Goal 8.C.11.]

Impact Analysis

Fuel loading is a known issue of concern. The MVCP Steering Committee requested the Placer County Planning Department to undertake a woodland/wildlife inventory as a first step in preparing a community forestry master plan to guide long-term management of Meadow Vista's environmental resources. The Steering Committee believes that a Forestry Master Plan is needed because the coexistence of the Ponderosa pine forest, foothill woodland, and brush in the Plan area results in a transition zone of woody species that is unique in the County. Lack of funding has prevented the development of a Forestry Master Plan for the Plan area. The committee is concerned about the extremely high fire danger in the community.

Successful implementation of the Vegetation Management Project would lead to favorable impacts on fire fighting agencies, as well. In the long run, the project would make it safer to fight fires around houses; would slow down the spread of fires between houses; and would lower overall fuel loads found in the forests of Meadow Vista. Overall long-term statistics for houses lost to fires, injuries to residents during fires, and costs of fire suppression are expected to go down. Care must be taken, however, to reduce the threat of wildland fire by adequate clean-up following timber operations, including provisions for controlled burning of slash and debris.

The CDF Fire and Resource Assessment Program (1997) conducted a preliminary benefit-cost analysis for the application of fuel breaks, fire-safe clearance around houses, and prescribe fire in the area of the communities of Applegate and Meadow Vista. While somewhat different in scope and approach than the program

proposed by this PTEIR, this study indicated that the examined prefire activities would produce benefits that were about 14 times the costs of the activities. These study results indicate a very high potential payoff for the kinds of prefire activities proposed in this PTEIR.

The PTEIR process could increase the short-term demand for wildland fire protection services through the use of more prescribed fires. The program can only be effective if the public is informed of its benefits through an education program administered by fire agency personnel, Resource Conservation Districts, and other agencies and organizations. The actual amount of increased demand cannot be determined because the levels of service will vary, depending on the commitment of fire service agencies and public participation.

California Forest Practice Rules Requirements

All applicable Forest Practice Rules will apply to any PTHP undertaken pursuant to the PTEIR. The following Rules are particularly relevant for fire protection. As part of the project description, these Rules will reduce many potential impacts to a less than significant level. Please see *Air Quality* for additional burning restrictions.

1. All woody debris created by timber operations greater than one inch but less than eight inches in diameter within 100 feet of permanently located structures maintained for human habitation shall be removed, chipped, or piled and burned; all slash created between 100-200 feet of permanently located structures maintained for human habitation shall be lopped for fire hazard reduction, removed, chipped or piled and burned; lopping may be required between 200-500 feet where unusual fire risk or hazards exist as determined by the Director or the RPF. (937.2(c))

2. Within 100 feet of the edge of the traveled surface of public roads, and within 50 feet of the edge of the traveled surface of permanent private roads open for public use, slash created and trees knocked down by road construction or timber operations shall be treated by lopping for fire hazard reduction, piling and burning, chipping, burying or removal from the zone. (937.2(b))

MITIGATION

1. Lop all logging slash to less than 20 inches above ground, except in those areas where current rules require other treatment (within 100 feet of residences).

2. Require clean up and disposal of debris on the ground within shaded fuelbreak projects to lower potential fire danger.

3. Require clean up and disposal of all substantial size debris (greater than 1 inch) within defensible space harvests to lower potential fire danger.

4. Require rapid surface drying (spreading of material away from wet areas) for material left on the ground to prevent increase in insect brood material.

5. All clean up and disposal of debris shall be by chipping, removing, or burning. Chipping shall occur no later than 45 days after creation. Piling for burning shall occur no later than 60 days after creation of the debris, with burning no later than April 1 of the year following creation or one year from date of creation, whichever comes first. Removal of debris shall occur no later than 60 days after its creation.

Level of Significance Following Mitigation

Implementation of the proposed mitigation measures will reduce potential fire protection impacts to a less than significant level.

Chapter 12. Environmental Information

12.1 ALTERNATIVES TO THE PROPOSED PROJECT

In accordance with Section 15126 of the CEQA Guidelines, the PTEIR must analyze a range of reasonable alternatives to the proposed project that could feasibly attain the objectives of the project. The CEQA Guidelines provide the following direction for analysis of the alternatives.

- Describe a range of reasonable alternatives to the project, or to the location of the project.
- Evaluate the comparative merits of the alternatives.
- If there is a specific proposed project, as in the case of the Meadow Vista Vegetation Management Project, explain why other alternatives were rejected in favor of the proposal
- Focus on alternatives capable of eliminating significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.
- If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

The stated purpose and objective of the Meadow Vista Vegetation Management Project is to reduce wildland fire hazards by implementing shaded fuelbreaks, defensible space, and defensible landscape practices in keeping with objectives of the Meadow Vista Community Plan utilizing the PTEIR/PTHP process.

This section identifies two alternatives to the proposed project including No Project (required by CEQA), and a PTEIR with Reduced Vegetation Management.

No Project Alternative

Under the No Project alternative, the PTEIR/PTHP process would not be used to implement vegetation management projects, including those proposed under the Proposition 204 project. Individual landowners could continue to clear vegetation for defensible space and defensible landscape purposes with little or no assistance or control from local or state agencies. Burning of removed material would be permitted by the air district on designated burn days. Shaded fuel breaks would be implemented by local and state agencies as well as private property owners on a voluntary basis and with funds as they become available. If commercial timber harvesting is proposed as part of the vegetation management process, then the existing THP process as administered by CDF would be pursued on an individual basis.

Impacts

It is likely that vegetation management and fuel load reduction would continue to occur, but at a slower rate than with the PTEIR project. The benefits of the application of Forest Practice Rules and mitigation measures within the PTEIR would be reduced with continued private application of fuel reduction measures.

Land Use and Planning. With the No Project alternative, policies of the Meadow Vista Community Plan advocating a fire safe community would not be as strongly reinforced as with the proposed project. The PTEIR/PTHP program is an implementation tool for general plan policy and provides a formal process supporting Placer County and other agencies in their fire management activities.

Geology and Soils. The Forest Practice Rules and the PTEIR mitigation measures provide a comprehensive approach to reducing soil erosion and sedimentation impacts to an insignificant level. As part of the PTHP, in-field monitoring would also be required by CDF to ensure that mitigation measures are implemented. With the No Project alternative, private fuel management activities would continue to be largely unregulated.

Hydrology and Water Quality. The No Project alternative would lead to largely unregulated fuel management, leading to greater potential for water quality impacts as a result of erosion and sedimentation when compared to the proposed project.

Visual Resources. Private fuel management activities, as well as past public agency brush removal projects, often have not been sensitive visual resource impacts in the Meadow Vista community. The PTEIR/PTHP process requires consideration of visual resources and would result in fewer impacts than the No Project alternative.

Biological Resources. The PTEIR/PTHP process requires a pre-operation field survey to identify specific habitats and species concerns and provides other safeguards to protect biological resources. The No Project alternative has no such mitigation requirements. Where fuel management is undertaken by individual property owners, greater impacts to biological resources could result when compared to the proposed project.

Cultural Resources. The PTEIR/PTHP process requires a pre-operation field survey to identify archaeological resources and provides that all activities must stop if such resources are uncovered during the operation and appropriate mitigation implemented. The No Project alternative has no such mitigation requirements. Where fuel management is undertaken by individual property owners, greater impacts to cultural resources could result when compared to the proposed project.

Noise. Noise impacts from chain saws and heavy equipment will not differ substantially with the No Project alternative, although the PTEIR contains mitigation limiting the hours of operation of such equipment.

Air Quality. The proposed project requires that burning of downed material be used only after all other disposal alternatives have been investigated. In addition, coordination with chipper programs is also encouraged. Under the No Project alternative, and with largely private property owner brush removal, it is likely that burning will continue to be the first disposal option considered, leading to continued air quality impacts from smoke, CO and PM_{10}.

Traffic and Circulation. Impacts to traffic and circulation will not differ significantly with the No Project alternative. Fuel management activities adjacent to roadways will continue to be primarily a public agency responsibility and appropriate traffic control and safety measures will be undertaken.

Fire Protection. Impacts to fire protection agencies will be greater with the No Project alternative compared to the proposed project. This could be especially true if the continued build-up of fuel load contributes to a catastrophic wildfire in the community.

Fuel loads would gradually build up throughout the Meadow Vista Community as vegetation densities increase in the absence of harvesting and/or vegetation management. As a result, risks of damaging wildfires would increase relative to existing conditions which would likely result in higher long term losses of houses to fire, as well as an increased potential for human injury during fires.

Increased Impacts as a Result of the Alternative

Compared to the proposed project, the No Project alternative would increase impacts in several areas.

- increased soil erosion and sedimentation leading to greater potential for water quality impacts
- increased impacts to visual resources
- increased potential for impacts to biological and cultural resources
- increased emissions from burning and associated impacts to air quality
- greater impacts to fire protection agencies resulting from an increased potential for a catastrophic fire

Summary. Because of the fuel management practices and standards specified in the PTEIR, the proposed project would reduce wildfire hazards and well as impacts to environmental resources relative to the No Project alternative.

PTEIR with Reduced Vegetation Management

With the Reduced Vegetation Management alternative, the PTEIR process would permit removal of only 15-40% of ground cover instead of the 40-60% proposed with the existing project. This would be accomplished through restriction on the types of silvicultural practices allowed within any PTHP.

Silvicultural practices from the Forest Practice Rules are defined in the *Introduction and Project Description*, including those to be applied in the various harvesting methods described in the PTEIR. Most of the defined practices are allowed under the PTEIR system. With the Reduced Vegetation Management alternative, only alternative prescriptions would be allowed with provisions similar to the Sanitation/Salvage system. Under Sanitation/Salvage, only those trees that are dead, dying, or that have severe structural problems are removed. The Forest Practice Rules alternative prescription would allow a limited number of green trees to be removed.

Land Use and Planning. With the Reduced Vegetation Management alternative, policies of the Meadow Vista Community Plan advocating a fire safe community would not be as strongly reinforced as with the proposed project. There would be somewhat fewer conflicts in general plan policy direction, however. For example, while the Meadow Vista Community Plan calls for a system of fuelbreaks, plan policy also advocates wildlife habitat preservation and protection of viewsheds. Although the potential for wildland fires would be greater with the Reduced Vegetation Management alternative, it provides the community with an opportunity to balance environmental objectives.

Geology and Soils. The Reduced Vegetation Management alternative would result in less ground disturbance than the proposed project. The Forest Practice Rules, the PTEIR mitigation measures, and in-field monitoring required by the PTHP process, however, ensure that impacts to soils with the proposed project or with the Reduced Vegetation Management alternative would be insignificant.

Hydrology and Water Quality. The Forest Practice Rules, the PTEIR mitigation measures, and in-field monitoring required by the PTHP process ensure that impacts to water quality as a result of erosion and sedimentation with the proposed project or with the Reduced Vegetation Management alternative would be insignificant.

Visual Resources. Less vegetation would be removed with the Reduced Vegetation Management alternative. The PTEIR/PTHP process requires consideration of visual resources and this aspect would be strongly reinforced with the Reduced Vegetation Management alternative. This emphasis would likely result in fewer visual impacts than with the proposed project.

Biological Resources. Because there would be less vegetation manipulation, there would be relatively fewer potential impacts to wildlife habitat with this alternative. A CWHR run was used to gauge this reduced wildlife impact of lower vegetation removals. As was theorized, species which require more dense vegetation habitats had habitat values increase, while those that prefer more open vegetation had values reduced. The PTEIR/PTHP process requires a pre-operation field survey to identify specific resources and provides other safeguards to protect biological resources.

Cultural Resources. The PTEIR/PTHP process requires a pre-operation field survey to identify archaeological resources and provides that all activities must stop if such resources are uncovered during the operation with appropriate mitigation implemented. This provision would apply to either the proposed project or the Reduced Vegetation Management alternative.

Noise. Noise impacts from chain saws and heavy equipment will not differ substantially with the Reduced Vegetation Management alternative and the PTEIR contains mitigation limiting the hours of operation of such equipment.

Air Quality. The proposed project requires that burning of downed material be used only after all other disposal alternatives have been investigated. In addition, coordination with chipper programs is also encouraged. These same provisions would apply to the Reduced Vegetation Management alternative. Although there is a somewhat greater potential for burning with the proposed project, impacts of either alternative are not expected to be significant.

Traffic and Circulation. Impacts to traffic and circulation will not differ significantly with the Reduced Vegetation Management alternative. Fuel management activities adjacent to roadways will continue to be primarily a public agency responsibility and appropriate traffic control and safety measures will be undertaken.

Fire Protection. Impacts to fire protection agencies will be greater with the Reduced Vegetation Management alternative compared to the proposed project. This could be especially true if the continued build-up of fuel load contributes to a catastrophic wildfire in the community. Although fuel loads would be reduced on the forest floor, areas of vegetation with vertical and horizontal continuity will still exist. As a result, risks of damaging wildfires would increase, likely resulting in higher long term fire losses and injury.

Increased Impacts as a Result of the Alternative

Compared to the proposed project, the Reduced Vegetation Management alternative would increase impacts to fire protection services and could lead to the greater potential for a catastrophic fire in the future.

Summary. With the Reduced Vegetation Management alternative, less vegetation would be removed than with other silvicultural practices. This could result in less land disturbance, fewer impacts to wildlife, reduced visual impacts, and slightly reduced potential for air quality impacts.

Reduced vegetation management practices inherent in this alternative would not meet the objective of the project which is to reduce wildland fire hazards. By only removing 15-40% of ground cover, areas of vegetation with vertical and horizontal continuity will still exist; as a result, long term fire danger would still include a significant risk of destructive crown fires. This alternative would then not meet many policy objectives of the Meadow Vista Community Plan to provide a fire safe community.

It is important to note that as greater limitations are placed on the PTEIR process (i.e. restrictions on vegetation removal, more stringent mitigation requirements), fewer property owners will voluntarily choose this alternative and the potential effectiveness of Forest Practice Rules and mitigation measures in the PTEIR will be reduced.

Environmentally Preferred Alternative

The proposed PTEIR project is the environmentally preferred alternative. No Project would not provide the incentives for vegetation management that the PTEIR project would, nor would environmental protection measures be assured with continued private property owner pursuit of fuel load reduction.

The PTEIR with Reduced Vegetation Management alternative would reduce several potential environmental effects of the project but would not meet the overall objectives of the project to reduce wildfire hazards. This could result in greater potential for a catastrophic wildfire in the Meadow Vista community and resulting significant impacts to water quality, biological, visual, cultural and air quality resources, as well as life and property.

12.2 CUMULATIVE IMPACTS

Cumulative impacts refer to two or more effects that, when combined, are considerable or compound other environmental impacts. A discussion of cumulative impacts is required when such impacts are significant (State CEQA Guidelines Section 15130). Evaluation of cumulative impacts should be based on a list of past, present, and reasonably anticipated projects.

Within the past ten years, there have been a number of projects within the Meadow Vista Community Plan area that had the potential to impact various resources. The area used for cumulative assessment is generally from the Bear River east to the Southern Pacific Railroad tracks east of Interstate 80, and from the Weimar Crossroads exit on the Interstate south to the Dry Creek exit on the freeway. Resources that could have been potentially impacted included the watershed, biological (both plants and animals), soil productivity, visual resources, and air quality.

The cumulative projects include:

Subdivisions:

- Naturewood, in Section 29,30 & 31 of T14N R9E, MDM.

- Winchester, in Sections 11,12,13 & 14, T13N R8E. This is a 409 lot subdivision with an eighteen hole golf course. Approved plan calls for Nature, Woodland and Wetland Preserves.

Past Timber Harvest Plans:

1988: 2-88-59-PLA(3); 86 acres of alternative prescription located in Sections 5 & 6, T13N R9E, MDM.
1995: 2-95-184-PLA(3); 420 acres of conversion in Sections 11,12,13,14 of T13N R8E, MDM. This was for the Winchester subdivision.

1996: 2-96-014-PLA(3); 16 acres of Alternative prescription in Section 36, T14N R8E, MDM. This was a modified shelterwood, removal step harvest.
1998: 2-98-095-PLA(3): 19 acres of harvesting, including 13 acres of clearcutting in three units, four acres of shelterwood removal step and two acres of sanitation salvage. No new road construction or watercourse crossings involved.

Other Timber Harvests:

There have been various timber harvest plan exemptions and conversion exemptions filed and harvested for dead/dying trees, for removal of vegetation to build houses and other structures, and for firesafe purposes around existing houses, powerlines, and other buildings. These are scattered around the entire community plan area.

Watershed. Vegetation management harvesting has the potential to impact watershed values through direct impacts to watercourses, including removal of shading vegetation, soil erosion into watercourses, and debris falling into watercourses. When added to the effects of overall urbanization, increased housing construction, and the introduction of increased impervious surfaces, these effects are potentially significant.

The PTEIR/PTHP process, however, will reduce the contribution of participating projects to cumulative watershed impacts by providing mitigation measures and the application of Forest Practice Rules to individual properties.

Such measures include the requirement for mapping all watercourses; restricting harvesting and heavy equipment within watercourse zones; prohibiting operations on high or extreme erosion hazard areas; requiring soil stabilization

measures on roads and skid trails; and leaving an overstory in all areas to reduce rainfall impacts. Cumulative impacts will also be reduced by implementation of the Proposition 204 project with specific programs intended to improve water quality in the American River Watershed. With these measures in place, the contribution of the proposed project to cumulative watershed impacts is less than significant.

Soil Erosion/Productivity. The potential for impacts to soil productivity and erosion increases with urbanization and vegetation management activities. To the extent that such activities are regulated by public agencies (subdivision maps, building permits, projects subject to CEQA, CDF regulated projects, etc.) the potential for significant effects is reduced through the application of standards, mitigation measures, and monitoring. It is primarily unregulated activities or those not adequately monitored which contribute most significantly to cumulative soil erosion impacts.

The PTEIR/PTHP process provides soil erosion control measures and limits the contribution to cumulative impacts to a less than significant level. The potential to impact soil productivity and erosion is reduced by Forest Practice Rules and mitigation measures including erosion hazard rating (EHR) mapping down to five acre areas; prohibiting timber operations on high or extreme EHR areas; requiring soil stabilization measures on all skid trails and roads; and prohibiting heavy equipment operations within a watercourse. Cumulative impacts to soils will also be reduced by the Proposition 204 project as its programs are intended to reduce or eliminate non-point sources of pollution, including sedimentation, to area waterways.

Biological Resources. The California Wildlife Habitat Relationships (CWHR) System model run prepared for this PTEIR demonstrates that urbanization in general has a far greater impact on wildlife resources than does vegetative management for fuel reduction (habitat for 47 species lost with urbanization assumptions). As a contributing factor to cumulative biological impacts, however, the PTEIR/PTHP process will result in the selective removal and thinning of vegetation, including a limited number of snags and downed woody debris near roads and around houses as a fire prevention measure.

The CWHR model run indicates that habitat for 72 identified species will be negatively impacted, but for 60 of those species, the decrease in habitat value is less than 5%. This minor decrease in habitat values for some species will be offset by the anticipated increase in habitat value for 102 identified species and by reducing the wildland fire threat for all wildlife and habitat in the area. Watercourse protection measures discussed under "Watershed," above, will also benefit long-term biological resources of the area. With these measures in place, the contribution of the proposed

project to cumulative biological impacts will be less than significant.

Visual Resources. Visual resources will change with cumulative urbanization and vegetation management activities. In some cases, particularly with clearcutting for development of homes, parking, and associated areas, visual resources will be negatively impacted and the character of the immediate area will be changed from a rural and forested environment to a largely urban setting. Vegetative management under the PTEIR/PTHP process will add to these cumulative effects, but the overall impacts will be reduced by the types of harvesting practices required. Because the type of treatment would retain a mixture of some of mature tree growth and a portion of existing ground cover on the site, the contribution of the proposed project to cumulative visual impacts is less than significant.

Shaded fuel break and defensible space areas around houses reduce the amount of vegetation on any particular site, but remaining vegetation will be healthier, and less prone to fire. Visual mitigation includes clean-up of logging slash in areas around houses and adjacent to public access roads; and requirements that a minimum amount of vegetation be left immediately after harvest.

Air Quality. Cumulative air quality impacts are considered potentially significant with continued burning of slash and downed material as urbanization and vegetative management activities occur in the Meadow Vista area. Burning is permitted under the THP process, the CDF fire plan, and by individual property owners subject to CDF and PCAPCD permit procedures. Burning, even on designated burn days, can violate air quality standards for carbon monoxide and particulate. Smoke, in particular, is a nuisance and can adversely affect those with breathing problems.

Under the PTEIR/PTHP process, burning is tightly restricted which could benefit overall air quality as an increased number of property owners participate in the program. Other disposal alternatives, such as chipping and/or removal, are strongly favored over burning. Therefore, the contribution of the proposed project to cumulative air quality impacts is considered minor.

Analysis within the PTEIR indicates, however, that even if all downed material from vegetation management activities were burned at one time, the air quality impacts would be significantly less than those anticipated from a single catastrophic fire if the project was not implemented. Therefore, the proposed project offers a significant benefit above the No Project alternative.

12.3 GROWTH-INDUCING IMPACTS

Evaluation of growth-inducing impacts is based on CEQA Guidelines Section 15126 (g), requiring a discussion of the ways in which a proposed project could:

- Foster economic or population growth;
- Encourage, either direct or indirectly, the construction of additional housing;
- Remove obstacles to growth; or
- Encourage or facilitate, individually or cumulatively, other activities that could significantly affect the environment.

The Vegetation Management Project has limited growth inducing impacts. Reduction of fuel loading and creation of healthier forests in the Meadow Vista area will not foster additional population growth, but rather make the community more fire safe for existing residents. Policies of the MVCP and regulations of the Placer Hills Fire Protection District will also make new development more fire-safe.

Heavy fuel loading and high wildland fire potential has not historically proven an obstacle to growth. Residents generally desire dense vegetation and the privacy, scenery, and wildlife that it brings. Information programs and regulations such as defensible space requirements have educated the public concerning the need for vegetation management. In this regard, the proposed project may be viewed by some as creating a less desirable residential environment. Application of Forest Practice Rules and mitigation measures from the PTEIR will reduce such impacts to a less than significant level.

Chapter 13. Mitigation Monitoring Program

State law (Public Resources Code Section 21081.6) requires all public agencies to adopt reporting or monitoring programs when they approve projects subject to environmental documents with mitigation measures. As mandated by this law, a mitigation monitoring program must be implemented by CDF following certification of the Final PTEIR for the Meadow Vista Vegetation Management Project.

A two part monitoring system is proposed. First, the Forest Practice Rules require that a PTEIR checklist be filled out and accompany a PTHP submitted to CDF for their review and approval. The proposed checklist for this PTEIR is contained in Appendix A. Questions contained in the checklist are tied to the mitigation measures included in the PTEIR and ensures that these mitigation measures are incorporated in any resulting PTHP. Lack of consistency with the PTEIR and its relevant mitigation measures will result in denial of the PTHP.

The second portion of monitoring will occur in the field following implementation of mitigation measures. As part of the standard THP administrative process required by law (Public Resources Code Sections 4604, 4585, and 4586), active operations are to be inspected by CDF and a work completion report filed at the end of operations. The Department must then do a follow up inspection for completion of operations to monitor potential adverse impacts to the environment. Should adverse impacts be found, a series of remedies is available to address the problems (Public Resources Code Sections 4601 - 4612).

This two-step monitoring process will ensure that mitigation measures are properly incorporated within any PTHP undertaken pursuant to this PTEIR, and that mitigation measures are properly implemented in the field. The following table lists the PTEIR mitigation measures and their relationship to the checklist questions.

Mitigation Measures (No.)	Checklist Question No. (subsections of Item No.10)
Geology and Soils	
1	Aa
2	Ak
3	Ah
4	Al
5	Al
6	Id
7	Bj, Bi
8	Bk
9	Am

Mitigation Measures (continued)	Checklist Question No. (continued)
Geology and Soils (continued)	
10	Ad
11	An
12	Cc, Be, Ai
13	Bl, Bk
Hydrology and Water Quality	
1	Ba - Bg
2	Bk, Bj
3	Bj, Cc
4	Cb
Visual Resources	
1	Cb, Cf, Bi
2	Cb
3	Cb
Biological Resources	
1	Da
2	Dd
3	Da, Dc, Dd
4	J4
5	Db
6	Bi
7	Cb
Cultural Resources	
1	Ea, Eb
2	Ec, Ed, Ee
3	J2
Noise	
1	Fb, Fc, Fd
Air Quality	
1	Gd
2	Ga
3	Gf, Ge
4	Gf
5	Gg
Traffic and Circulation	
1	Hb
2	Hc
Fire Protection	
1	Id
2	Ib
3	Ic
4	Id

Chapter 14. Sources Consulted

California Department of Forestry & Fire Protection

Personnel contacted at Sacramento Headquarters Office

- Wayne Mitchell, Fire Plan Chief
- Allen Robertson, Environmental Coordinator
- Pete Cafferata, Watershed Specialist
- Dan Foster, Archaeologist
- Marty Berbach, Wildlife Biologist

Personnel contacted at Sacramento Fire and Resource Assessment Program

- Dave Sapsis, Fire Science Consultant
- Russ Henly, Policy Analyst
- Bob Motroni, Wildlife Biologist
- Clay Brandow, Watershed Specialist
- Dean Cromwell, Natural Resource Policy Specialist

Personnel contacted at Nevada-Yuba-Placer Ranger Unit Headquarters in Auburn

- Kelly Keenan, Unit Forester
- Ken Nielson, Unit Forester (Former)
- Sean Griffis, Unit Prefire Engineer

Literature

- “Benefit/Cost Analysis for Prefire Management Projects (Draft),” October 16, 1997, Fire and Resource Assessment Program, California Department of Forestry and Fire Protection.
- "California Fire Plan, A Framework for Minimizing Costs and Losses from Wildland Fires", March 1996, California Department of Forestry & Fire Protection.
- Draft of 8/97: "Nevada-Yuba-Placer Prefire Management Plan 1996", Nevada/Yuba/Placer Ranger Unit, CDF.
- Summary of Notice of Intents for Timber Harvest Plans, 1987-1997.

- CalFed Watershed assessment maps
- September 1998 Draft "Program Environmental Impact Report For Vegetation Management Program", prepared by Jones & Stokes Associates, Inc.
- Mayer,K.E. and W.F. Laudenslayer,Jr. 1988. A guide to wildlife habitats of California. California Department of Forestry and Fire Protection. Sacramento, CA.
- Monitoring Study Group of the State Board of Forestry. 1993. Assessing the effectiveness of California's Forest Practice Rules in protecting water quality. Sacramento, CA.

Placer County Planning Department

- Dean Prigmore, Assistant County Planning Director
- Larry Clevenger, Senior GIS Technician

Literature

- Meadow Vista Community Plan, 1996
- Meadow Vista Community Plan, Final and Draft Environmental Impact Report, 1996, Jones & Stokes Associates, Inc.
- Placer County General Plan, August 1994
- Placer County Zoning Ordinance, November 14, 1996
- Placer County Tree Ordinance, October 1991

Placer County Air Pollution Control District, Auburn Office

- Ann Hobbs, Associate Air Quality
- Dace Vintze, Associate Air Quality Planner

Natural Resource Conservation Service, Auburn Office

- Soil Survey of Placer County, California, Western Part, 1980, USDA/SCS.
- Cliff Heitz, District Conservationist
- Conservation Practice Standards for Firebreak, 1998. Fuel-Break, 1998. Tree/Shrub Pruning, 1996. Brush Management, 1996. Forest Stand Improvement, 1996.
- Ronald Schultze, State Biologist out of Davis Office

California Department of Fish & Game

- Wildlife Habitat Relationship System
- Blue Canyon Deer Management Plan, 1982
- Jeff Finn, Biologist for Nevada/Placer Counties
- Jennings, M.R. and M.P. Hayes. 1994. Amphibian and reptile species of special concern in California. Final Report. California Department of Fish and Game, Inland Fisheries Division. Rancho Cordova, CA.
- Remsen,J.V.,Jr. 1978. Bird species of special concern in California. (Nongame Wildlife Investigations Wildlife Management Branch Administrative Report No. 78-1). California Department of Fish and Game. Sacramento, CA.
- Williams,D.F. 1986 mammalian species of special concern in California (Wildlife Management Division Administrative Report 86-1). California Department of Fish and Game, Wildlife Management Division. Sacramento, CA.
- Zeiner,D.C., W.F. Laudenslayer,Jr, K.E. Mayer, and M.White. 1990. California's wildlife. Volume III: Mammals. California Statewide Wildlife Habitat Relationships System. California Department of Fish and Game. Sacramento, CA.

Central Valley District, Water Resources Control Board, Sacramento office.

- Basin Plan, 1990, 1994

Other Literature reviewed:

- University of California, Davis. 1996. Sierra Nevada ecosystem project: final report to Congress. status of the Sierra Nevada. Centers for Water and Wildland Resources, University of California, Davis. Davis, CA.
- Skinner,M.W. and B.M. Pavlik, (eds.). 1994. California Native Plant Society's inventory of rare and endangered vascular plants of California. 5th edition. (Special Publication No.1). California Native Plant Society. Sacramento, CA.
- Timber Harvest Plan files for Meadow Vista Area THPs done by Douglas Ferrier, RPF.
- California Public Resources Codes 4290 & 4291.

- Draft Program Timberland Environmental Impact Report for Hearst Forests, 1997, prepared by Jones & Stokes Associates, Inc.
- Anderson, Hal E. 1982. Aids to determining fuel models for estimating fire behavior. U.S.D.A. Forest Service General technical report INT-122). Intermountain Forestry and Range Experiment Station, Ogden, UT.
- Placer County Resource Conservation District. 1997. The Defensible Space and Healthy Forest Handbook a guide to reducing the wildfire treat. Placer County RCD. Auburn, CA.
- 1988 & 1992 black and white aerial photography of Meadow Vista Community Plan area. WAC Corporation. Eugene, OR.

Other Contacts:

- Meadow Vista Municipal Advisory Council
- Placer Hills Fire Protection District
- Stan MacDonald, Registered Professional Forester

Appendix A
PTEIR Checklist

Appendix B
Initial Study

Appendix C
NOP Responses

Appendix D
CWHR Model Results

Note: Only a brief summary of results is presented here. For the complete reports of the two CWHR model runs done for this report, contact Russ Henly at the California Department of Forestry and Fire Protection (916-227-2659; russ_henly@fire.ca.gov).